March 31, 2025

Regional TSCA Coordinator
U.S. Environmental Protection Agency, Region 1
5 Post Office Square (Mail Code OSR)
Boston, MA 02109-3912

Subject: Self-Implementing Cleanup Notification; 40 CFR 761.61 (a)
4 Wright Street
New Bedford, Massachusetts
Release Tracking Number 4-0050261
CEC Project 332-344

Dear Regional Coordinator:

Civil & Environmental Consultants, Inc. (CEC) has prepared and submitted a Release Abatement Measure Plan (RAM Plan) to the Massachusetts Department of Environmental Protection (MassDEP) on behalf of Massachusetts Clean Energy Center pursuant to Section 310 CMR 40.0444 of the Massachusetts Contingency Plan (the MCP). The RAM Plan has been submitted to the MassDEP to facilitate the excavation and management of PCB-impacted soil present on the several recently acquired parcels (the Property) located adjacent to the New Bedford Marine Commerce Terminal (NBMCT) in New Bedford, Massachusetts. It is currently proposed that the Property will be converted into additional terminal space for the NBMCT. The Property includes 4, 18, and 54 Wright Street, along with 350 and 360-382 South Front Street. The NBMCT is an approximately 29-acre facility that is predominately structurally undeveloped but includes an approximately 24,500 square foot single story building on 4 Wright Street. There are greater than 21 acres of the NBMCT that have been engineered to accommodate a heavy-lift capacity of 4,100 pounds per square foot (psf). This was achieved by installing a surficial engineered barrier/cap composed of dense grade aggregate and other materials. The intention of this project is to extend this heavy lift capacity area across portions of the Property to create more functional space for the NBMCT to operate. Currently, on the existing facility the engineered barrier/cap consists of a three-foot section of dense-graded aggregate over top of native soils. The goal for the current expansion is to have a lower profile (i.e. thinner) "cap" on the new heavy lift areas to be located on the Property. As described below, from a regulatory standpoint the "cap" in these areas will not be intended to prevent exposure.

PCBs have been detected in soil at the Property at concentrations greater than 50 parts per million (ppm). Therefore, the response actions will be performed under the United States Environmental Protection Agency (USEPA) Toxic Substances Control Act (TSCA) regulations, specifically 40

CFR 761.61(a). As required by 40 CFR 761.61(a), please accept this letter and attached RAM Plan as the Notification for Self-Implementing Cleanups for PCBs and associated Cleanup Plan.

As you are aware, PCB remediation waste is defined by 40 CFR 761.3 as, *"wastes containing PCBs as a result of a spill, release, or other unauthorized disposal, at the following concentrations: Materials disposed of prior to April 18, 1978, that are currently at concentrations ≥ 50 ppm, regardless of the concentration of the original spill; materials which are currently at any volume or concentration where the original source was ≥ 500 ppm PCBs beginning on April 18, 1978 or ≥ 50 ppm beginning on July 2, 1979; and materials which are currently at any concentration if the PCBs are spilled or released from a source not authorized for use under this part."*

The source or age of the PCB release is not known; however, based on assessment conducted to date, the concentrations "as found" range between approximately non-detect and 3,040 mg/kg. The impacted soil is categorized as Bulk PCB remediation waste, as per 40 CFR 761.61(a)(4)(i) and the future use of the property is classified as low-occupancy. It will be a fenced, secure facility utilized by adult workers. The Self-Implementing Cleanup procedure is not being used to clean up PCBs in surface water, groundwater, sediment, sewers or sewage treatment systems, private or public drinking water sources or distribution systems, grazing lands, or vegetable gardens.

The proposed Cleanup Plan is to remove the soil on the Property with PCB concentrations above 25 mg/kg from the ground surface to depths between 1.75 feet and 2.5 feet below ground surface (bgs), based on analytical results. Soil removal will continue horizontally to the Property boundaries and/or to where soils do not exhibit PCB concentrations at or above 25 mg/kg. The current NBMCT has an engineered barrier/cap overlaying much of the site as described above. As part of the NBMCT expansion, a similar "cap" is proposed for the Property in order to accommodate heavy lift capacity. However, from a regulatory standpoint, the intended goal of the cap will not be to reduce exposure. It will consist of two layers of geogrid and select gravel fill (dense graded aggregate), totaling a thickness of approximately 18".

The content of the RAM Plan includes the site history, details regarding the site characterization, the conceptual site model, soil removal plan, post-excavation PCB cleanup verification sampling plan, analytical methods, and off-site soil disposal procedure. Per 40 CFR 761.61(a)(3)(ii), the EPA Regional Administration will disapprove or request additional information within 30 calendar days of receiving this notification. If EPA does not respond within 30 days, then the Notification is considered complete and the Cleanup Plan presumed acceptable.

The Certification associated with this Notification, as required by 40 CFR 761.61(a)(3)(i)(E) is attached to this letter.

If you should have any questions, please do not hesitate to contact the undersigned.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

Cassia Dal Bello
Project Manager

Jonathan D. Kitchen, PG, LSP
Principal

Attachments: Certification
Release Abatement Measure (RAM) Plan

cc: MassDEP Southeast Regional Office

## Certification

All sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrumental/chemical analysis procedures used to assess or characterize the PCB contamination at the cleanup site, are on file at the location designated in the certificate, and are available for EPA inspection.

Files are located at the following location:

**Massachusetts Clean Energy Center, 4 Wright Street, New Bedford, Massachusetts 02740**

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

Environmental Consultant
**Civil & Environmental Consultants, Inc.**

Jonathan D. Kitchen

Jonathan Kitchen, LSP
Principal

Property Owner/Potential Responsible Party (PRP)
**Massachusetts Clean Energy Center**

John Hitt

John Hitt, General Counsel

# RELEASE ABATEMENT MEASURE PLAN

## RELEASE TRACKING NUMBER 4-0050261

## NEW BEDFORD MARINE COMMERCE TERMINAL
## MASSACHUSETTS CLEAN ENERGY CENTER
## 4 WRIGHT STREET
## NEW BEDFORD, MASSACHUSETTS

**Prepared For:**

**FOTH INFRASTRUCTURE & ENVIRONMENT, LLC**
**15 CREEK ROAD, MARION, MA 02738**

**Prepared By:**

**CIVIL & ENVIRONMENTAL CONSULTANTS, INC.**
**31 BELLOWS ROAD**
**RAYNHAM, MA 02767**

**CEC Project 332-344**

**MARCH 2025**

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## 1.0 INTRODUCTION

Civil & Environmental Consultants, Inc. (CEC) has prepared this Release Abatement Measure Plan (RAM Plan) for the Massachusetts Clean Energy Center (MassCEC) through a subcontract with Foth Infrastructure & Environment, LLC (Foth (the Client). The RAM Plan has been prepared in accordance with M.G.L. c. 21E ("Chapter 21E") and pursuant to Section 40.0444 of 310 CMR 40.0000, the Massachusetts Contingency Plan (MCP). This RAM Plan is being submitted to the Massachusetts Department of Environmental Protection (MassDEP) to facilitate activities that will impact subsurface soils within the New Bedford Marine Commerce Terminal (NBMCT), located at 4 Wright Street, New Bedford, Massachusetts. The NBMCT is a multi-purpose marine terminal that provides critical infrastructure to facilitate offshore wind energy programs. Historically, the land where the NBMCT is currently situated was heavily used for industrial purposes, including a historical mill complex. The surrounding area in New Bedford is currently and was formerly used by marine related commercial/industrial businesses (e.g. fish processors). This area of New Bedford is also known for being part of the Acushnet Estuary Superfund site. Currently, MassCEC is in the process of expanding the NBMCT to encompass five existing commercial properties, owned by MassCEC (the Property). The proposed construction activities that may impact subsurface soils at the newly acquired parcels of the main terminal will include site preparation and demolition, fencing installation, water and electric utility installation, drainage utility installation, installation of foundations for lighting, installation of ground improvement/stabilization to facilitate expansion of the "heavy lift area," and any associated excavation of subgrade soils within the Property. During initial subsurface investigations, it was discovered that four of the five commercial properties displayed soil conditions that warranted a 120-day release notification. During additional subsurface investigations, concentrations of polychlorinated biphenyls (PCBs) were detected on the Property triggering regulation under the Toxic Substances Control Act (TSCA), the regulations for which are listed in Title 40 of the Code of Federal Regulations (CFR) Part 761 (40 CFR Part 761). More specifically, 40 CFR 761.61, which governs the management of PCB waste generated as the result of PCB spills and associated cleanup activities. Accordingly, the information was conveyed to the United States Environmental Protection Agency (USEPA) Region 1 TSCA Coordinator. Other activities may occur at the New Bedford Commerce Terminal that are not associated with is RAM Plan including, but not limited to; new bulkhead construction and on-going maintenance of the heavy lift area on the existing terminal. The expansion project has been divided into four "Sites." All Sites listed are covered under Release Tracking Number (RTN) 4-0050261 and are owned by MassCEC. A 120-day notification was submitted on May 5, 2024, under this RTN. See Figure 1 for a Site Locus Map, Figure 2 for a NBMCT Parcel Overview Map, and Figure 3 for an NBMCT Expansion Site Boundary Map which depicts the four Sites described on the next page:

**Site 1**
Address (Parcel ID): 54 Wright Street (31- 265) & 18 Wright Street (31- 249)
Lot Size: ~2.1 acres

**Site 2**
Address (Parcel ID): 350 South Front Street (31-218)/0 SS MacArthur Boulevard (31-237) & 360-382 South Front Street (31-144)
Lot Size: ~2.15 acres

**Site 3**
Address (Parcel ID): 4 Wright Street (31- 263)/portion of R ES South Front Street (31-288)
Lot Size: ~2.2 acres

All three Sites are included as a portion of "the Property" as defined above. Site 4 is also considered part of the Property, but the activities being conducted on this Site (i.e. construction of a new bulkhead) are currently considered outside of the Disposal Site and RAM area.

The NBMCT is an approximately 29-acre facility that is predominately structurally undeveloped but includes an approximately 27,500 square foot single story building on 4 Wright Street. There are greater than 21 acres of the NBMCT that have been engineered to accommodate a heavy-lift capacity of 4,100 pounds per square foot (psf) and has a surficial dense graded aggregate heavy-lift engineered barrier. The intention of this project is to extend this heavy-lift capacity across some of the above listed Sites to expand operations to these areas. Currently, the heavy-lift engineered barrier consists of a three-foot section of dense-graded aggregate over top of native soils. As part of this expansion, MassCEC proposes to have a similar design on the newly acquired Sites, but with a thinner profile (18 inches minimum). From an environmental perspective this has been evaluated and is considered to be an acceptable alternative, as discussed further in Section 5.2.4 of this report. The existing main terminal portion of the NBMCT is subject to multiple Activity and Use Limitations (AULs), and to the degree necessary some of the newly acquired Sites may follow in a similar fashion.

The preparation of this RAM Plan and response actions described herein has been and will be undertaken under the direction of Mr. Jonathan D. Kitchen, of Civil & Environmental Consultants, Inc., (CEC), who is registered as a Licensed Site Professional (LSP) by the Massachusetts Board of Registration of Hazardous Waste Site Cleanup Professionals per M.G.L. Chapter 21E. The Bureau of Waste Site Cleanup (BWSC) Release Abatement Measure Transmittal Form (BWSC106) has been completed and filed via eDEP as part of this submittal. An unsigned copy of each form and the associated signatory authorization are included as Appendix C. This RAM Plan is being filed to address the management the soil on the Property that is impacted by the release associated with RTN 4-0050261. As it relates to Site 1, it is also being filed to document a self-implementing PCB cleanup plan, pursuant to 40 CFR § 761.61.

Pursuant to 310 CMR 4.00, a one-time fee of $980 applies to the performance of this RAM and will be submitted to the Commonwealth of Massachusetts along with a copy of the cover page of the applicable Bureau of Waste Site Cleanup (BWSC) Release Abatement Measure Transmittal Form (BWSC 106). This will be submitted to MassDEP, PO Box 4062, Boston, MA 02211-4062.

## 2.0 ENTITY ASSUMING RESPONSIBILITY FOR CONDUCTING THE RELEASE ABATEMENT MEASURE

Pursuant to 310 CMR 40.0444(1)(a), the name, address, telephone number, and relationship to the Disposal Sites of the person assuming responsibility for conducting the RAM are presented here:

Entity Undertaking Response Actions (PRP): Massachusetts Clean Energy Technology Center
294 Washington Street
Boston, Massachusetts 02108
Phone: (617) 315-9300

Licensed Site Professional of Record: Jonathan D. Kitchen, LSP #7812
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, Massachusetts 02767
Phone: (774) 501-2176

**Certification of Sufficient Financial Resources**

In accordance with 310 CMR 40.0442 (5), "*Release Abatement Measures shall not involve the excavation of greater than 1500 cubic yards (cumulative, for the disposal site in question) of soil contaminated by oil and/or hazardous material at concentrations equal to or greater than applicable Reportable concentrations, unless a statement is provided in the Release Abatement Measure Plan by the RP, PRP, or Other Person conducting response actions certifying that, based upon information and opinions provided by an LSP, such persons have sufficient financial resources to manage excavated materials in the manner and time frames specified at 310 CMR 40.0030.*"

The Responsible Party, MassCEC, has been informed that the volume of soil for off-site disposal will exceed 1,500 cubic yards, and has confirmed that sufficient financial resources are available.

## 3.0 CONCEPTUAL SITE MODEL

Based on the information and data collected to date, CEC has developed this Conceptual Site Model (CSM) related to the release identified on the Property.

The Property and surrounding areas were located in and adjacent to the Acushnet River until it was filled in the 1960s and 1970s. The USEPA has and continues to, assess and remediate the Acushnet Estuary Superfund Site which encompasses the river and estuaries and is impacted with PCBs and metals. The source of the fill material used to create the land at the Property and surrounding areas is unknown, nor if the sediment in the river was removed prior to emplacing the fill material.

Additionally, the adjacent property, known as the NBMCT, has historically identified PCB soil contamination in close proximity to the property lines of the Property (specifically in the vicinity of the southern property boundaries of the Sites 1 and 3). The source of PCB contamination was not known but could be attributed to fill material quality or near surface releases associated with historic industrial activities; however, further details regarding any sources are not available at this time.

CEC completed an environmental investigation at the Property, including soil borings and the analysis of hundreds of soil samples for a broad suite of analytes, but with a particular focus on PCBs. Concentrations of PCBs in soil exceeded applicable MCP standards across the Property, with the highest concentrations of PCBs detected from samples an area along the southern property boundary of Site 1, that we refer to herein as the 'hot spot'. The highest PCB concentration detected in the hot spot was 3,040 ppm at soil boring B0-10E, from 0 to 1 feet below ground surface (bgs). Additionally, the concentrations of PCBs detected at the Property trigger regulation under TSCA (40 CFR Part 761.61). The groundwater at the Property has not been investigated, but the release on Site 1 is very much a fringe area of the larger release(s) that has been investigated and remediated on the current "Main Terminal." Groundwater has been investigated for that release and not significant impacts have been identified.

The surrounding receptors include construction workers and trespassers, as the Property is currently closed to the public, and will remain closed to the public during and after construction. The nearby New Bedford Harbor and utilities are also potential receptors, but given the lack of anticipated groundwater and/or vapor phase impacts, there does not seem to be a pathway to either of these receptors. Additional fencing and signage will be in place to limit access by construction workers and/or trespassers.

## 4.0 DESCRIPTION OF RELEASE, SITE CONDITIONS, SURROUNDING RECEPTORS, AND STATUS OF RESPONSE ACTIONS

Pursuant to 310 CMR 40.0444(1)(b), descriptions of the release, site conditions, and surrounding receptors are discussed below.

### 4.1 DESCRIPTION OF RELEASE

**Sites 1, 2, & 3**
**RTN: 4-0050261**

Initial Due Diligence Investigations at Sites 1 and 2

Between November and December 2023, CEC completed a subsurface soil investigation as part of the Due Diligence phase for the NBMCT terminal expansion to assess a widespread area where unknown quality fill material may be present. This was completed to generally characterize the quality of soil that may need to be managed during construction, and to address PCB-impacted soils previously identified in close proximity to some areas of the Property.

It should be noted that all soil borings completed at the Property to date, were advanced by a Hollow Stem Auger drill rig, a Geoprobe® drill rig, or manually with hand auguring equipment. All soil samples were placed into appropriate laboratory-supplied containers while wearing dedicated nitrile gloves for each sample location. The samples were sealed, labelled, and placed in a cooler on ice for delivery to the laboratory under proper chain-of-custody protocol. Field duplicate samples were collected at a rate of 1 per every 20 samples. One matrix spike/matrix spike duplicate (MS/MSD) sample was collected for every 20 samples collected. Field duplicates and MS/MSD samples were only analyzed for PCBs. All samples were analyzed by ESS Laboratories of Cranston, Rhode Island, and PCBs were analyzed utilizing USEPA SW-846 Method 8082A, upon completion of extraction utilizing USEPA extraction Method 3500C/3540C Soxhlet extraction.

The location of the soil borings described herein are depicted on Figures 4 through 10, and analytical results are shown on Tables 1 through 5. The investigation included advancing 21 soil borings to depths up to 26 feet bgs and analyzing 29 environmental soil samples for PCBs, MCP metals, and semi-volatile organic compounds (SVOCs) across Sites 1 and 2. At Site 1, the analytical results indicated that soil samples from borings CEC-4-2 and CEC-8-2 contained concentrations of total PCBs above the applicable MCP RCS-2 Reportable Concentrations. At Site 2, soil samples from borings CEC-2-3, CEC-4-3, CEC-5-3, and CEC-1-4 contained concentrations of various SVOCs including benzo(a)pyrene, 1,1-biphenyl, acenaphthylene, and phenanthrene, above the applicable MassDEP RCS-1 Reportable Concentrations.

Site 1 – PCB Delineation

In December 2023, CEC returned to Site 1 to complete an additional subsurface soil investigation to delineate the PCB-impacted soils discovered during the due diligence phase described above. A grid approach was used, and 16 soil borings were advanced to depths up to 8-ft bgs in a 25-ft by 25-ft grid pattern in the area where the initial PCB exceedances were identified. Of the 16 soil borings, 52 discrete soil samples were analyzed for PCBs. Out of the 52 samples submitted, all samples were below 1 mg/kg except for samples with concentrations of 2.2 mg/kg (F-0 0-1 feet bgs), 1.6 mg/kg (A-4 2-3 feet bgs), and 1.5 mg/kg (BB-0 2-3 feet bgs). CEC returned to the Site between May 2024 and August 2024 to continue PCB delineation. CEC advanced 104 soil borings to a depth of up to 5 feet bgs across a 25-foot by 25-foot grid in the general PCB-impacted area, and across a 5-foot by 5-foot grid in the hot spot area for PCB delineation as per USEPA sampling frequency requirements. Out of hundreds of samples that were submitted for PCB analysis (including some samples from Program 1), 21 samples had detections of PCBs greater than the USEPA TSCA threshold of 25 mg/kg (hot spot area only); 30 samples had detections of PCBs between 1 mg/kg and 25 mg/kg; and the remaining samples had detections of PCBs less than 1 mg/kg. CEC has determined Site 1 to be adequately delineated for PCBs based on the number of samples analyzed and the results. See Figures 5 and 6, and corresponding Table 2 for analytical results.

Site 1 – Waste Characterization

At Site 1, between May 2024 and August 2024, CEC continued soil investigations to characterize the soils for reuse and disposal, CEC advanced 45 soil borings to a depth of 5 feet bgs in a 50-foot by 50-foot grid pattern. CEC submitted 48 samples for waste characterization including the analysis of Resource Conservation and Recovery Act (RCRA) eight metals, PCBs, total petroleum hydrocarbons (TPH), SVOCs, pesticides, herbicides, reactivity, conductivity, pH, free liquid, flashpoint, volatile organic compounds (VOCs). All waste characterization samples were composited except for the soils submitted for VOCs, which were discrete samples.

Site 1 – Lead Delineation

During the waste characterization investigation at Site 1 described above, a soil sample from soil boring D-8.5 exceeded the RCS-2 reportable concentration for lead with a concentration of 4,060 mg/kg, however, the sample was re-composited and re-analyzed twice by the lab and the concentration was then reported as 73.8 mg/kg, which is below the RCS-2 reportable concentration lead. ESS revised the original lab report to report the re-analyzed concentration of 73.8 mg/kg for D-8.5. Additional waste characterization sample locations displayed concentrations of lead above or approaching the RCS-2 reportable concentration of 600 mg/kg including composite samples from soil borings E-1 (676 mg/kg) and G-1 (441 mg/kg). Additionally, various composite samples (E-1, E-5, G-1, II-8.5, CEC-1-1, and CEC-2-1) were above the MCP Method 1 standard for lead of 200 mg/kg (see Figure 7). Due to these lead exceedances, CEC had additional discrete soil samples analyzed in order to delineate the potential lead impacts at the site. Although lead

exceeded the RCS-2 and MCP Method 1 standard at various locations and depths across Site 1, most of the exceedances are at depths 4 feet bgs or greater. As part of the Site development, soils greater than 1.75 feet bgs are anticipated to remain in place and will be covered by the proposed 1.5 foot thick heavy-lift barrier. Soils that are anticipated for removal or re-use (within the top ~1.75 feet bgs) indicate concentrations of lead below the applicable RCS-2 reportable concentration across the Site. See Table 3 for analytical results.

Initial Release Notification

On May 24, 2024, CEC submitted a Release Notification Form (RNF) for 120-day reporting to MassDEP for the exceedances described above at Sites 1 and 2. MassDEP issued MassCEC a Notice of Responsibility (NOR) related to the Release and assigned RTN 4-0050261 (the Disposal Site). Copies of the RNF and NOR are provided in Appendix C.

Site 3 – Waste Characterization

At Site 3, between May 2024 and August 2024, CEC completed a soil investigation to characterize the soils for reuse and disposal, and Program 2 was to delineate potential PCB impacts at the southwest corner of the Site. As part of Program 1, CEC advanced 30 soil borings to a depth of 5 feet bgs for waste characterization purposes. CEC submitted 30 samples for waste characterization for the analysis of RCRA eight metals, PCBs, TPH, SVOCs, pesticides, herbicides, reactivity, conductivity, pH, free liquid, flashpoint, VOCs. All waste characterization samples were composited except for the soils submitted for VOCs, which were discrete samples. All sample results were below RCS-2 reportable concentrations.

Site 3 – PCB Delineation

Between May 2024 and August 2024, CEC advanced three soil borings to a depth of up to 2 feet bgs for PCB delineation to determine the extent of potential PCB-impacts due to proximity to known PCB impacts on the existing Main Terminal. Three samples were analyzed for PCBs, and one sample (L0 from 0-1 feet bgs) contained a concentration of 2.9 mg/kg, with all other results below 1 mg/kg. See Figure 9, and the corresponding Table 5 for analytical results.

Site 2 – SVOC and Petroleum Hydrocarbon Soil Investigation

At Site 2, in September 2024, CEC completed a soil investigation to delineate the known SVOC impacts described further above. CEC advanced nine additional soil borings across the site to depths between 8 and 14.5 feet bgs. Petroleum-like odors and elevated PID readings were observed in the soils at boring location CEC-8-3. As a result of this, three samples from CEC-8-3 were submitted for the analysis of SVOCs, volatile petroleum hydrocarbons (VPH) with target VOCs, and extractable petroleum hydrocarbons (EPH) with target polycyclic aromatic hydrocarbons (PAHs). The remaining 12 samples from all other soil borings were analyzed for SVOCs only. Results were compared to the MCP RCS-1 reportable concentrations. 2-methylnaphthalene, 2,4-dinitrotoluene, and $C_9$-$C_{10}$ aromatics were detected at concentrations above RCS-1 reportable

concentrations at CEC-8-3 (12-14.5 feet bgs), CEC-8-3 (7-8 feet bgs), and CEC-8-3 (7-8 feet bgs), respectively. At CEC-7-3 (0-4 feet bgs), 1,1-biphenyl was detected at a concentration of 0.064 mg/kg, above the RCS-1 reportable concentration of 0.05 mg/kg. At CEC-7-4 (0-4 mg/kg), phenanthrene was detected at a concentration of 10.4 mg/kg, above the RCS-1 reportable concentration of 10 mg/kg. Additionally, benzo(a)pyrene was detected at concentrations above RCS-1 reportable concentrations in six composite samples across the site. See Figure 10 for soil boring locations, and corresponding Table 4 for analytical results.

Secondary Release Notification

On January 21, 2025, CEC submitted a second RNF for 120-day reporting to MassDEP under the same RTN (4-0050261) due to 2-Methylnaphthalene, 2,4-dinitrotulene, and C9-C10 aromatics triggering a new reportable condition at Site 2. A copy of the RNF is included in Appendix C.

## 4.2 SITE CONDITIONS

The NBMCT is situated within an industrial area along the coast of New Bedford Harbor in New Bedford, Massachusetts. The Army Corps of Engineers (USACE) Hurricane Barrier is located in New Bedford Harbor to the immediate southeast of the Main Terminal. The NBMCT is located south of Wright Street near the intersection of MacArthur Drive and Wright Street (Figure 2). Also included within the NBMCT is the Former Dartmouth Finishing Site that is separately located, 550-feet south of the Main Terminal on Cove Street (Figure 2). The NBMCT is an approximately 29-acre facility that is predominately structurally undeveloped but includes an approximately 27,500 square foot single story building at 4 Wright Street. There are greater than 21 acres of the NBMCT that have been engineered to accommodate a heavy-lift capacity of 4,100 psf and has a surficial dense graded aggregate engineered barrier. There is minimal vegetation on the NBMCT with some landscaped grass and trees in certain areas.

The expansion area that will encompass portions of the three Sites described further above (Figure 3). Site 1 is improved with two buildings; one ~3,750 square foot vacant warehouse-style building that was formerly occupied by a vehicle repair shop and a marine electronic repair office and one ~10,000 square foot vacant manufacturing-style building that was formerly occupied by a seafood processing company. Site 2 is improved with two buildings; one ~6,400 square foot vacant manufacturing-style building, which was formerly used for fish processing, and one ~21,500 square foot vacant manufacturing style building that was formerly occupied by seafood processing companies. Site 3 is improved with one ~27,500-square foot office/warehouse style building which is currently occupied by MassCEC and their current tenant, Vineyard Wind, and houses a portion of the NBMCT. Many of the buildings on these Sites are slated for demolition. The demolition work is considered outside the scope of this RAM Plan.

## 4.3 SURROUNDING CONDITIONS AND RECEPTORS

The NBMCT and expansion Sites are located in a residential/commercial/industrial area of New Bedford used primarily for the fishing industry. The Property is located near the Acushnet River, and the land use of the surrounding properties consists of wholesale seafood processing facilities and supporting businesses, along with occasional residential homes. The Property and surrounding areas were located in and adjacent to the Acushnet River until it was filled in the 1960s and 1970s. The USEPA has and continues to, assess and remediate the Acushnet Estuary Superfund Site which encompasses the river and estuaries and is impacted with PCBs and metals. The source of the fill material used to create the land at the Property and surrounding areas is unknown, nor if the sediment in the river was removed prior to emplacing the fill material.

The MassDEP – Bureau of Waste Site Cleanup Phase 1 Site Assessment Map indicates that the Property is located adjacent to a Federal Emergency Management Agency (FEMA) 100-year Floodplain. The nearby Acushnet River is classified by the Natural Heritage & Endangered Species Program (NHESP) as a Priority Habitat of Rare Species. There are no public drinking water supply wells or drinking water resource areas within a ¼ mile of the Property (Appendix A).

## 4.4 SUBSURFACE CONDITIONS

Based on subsurface investigations completed at these Sites, the top 6 feet of subsurface soils consists of fine to medium sandy fill. Ash, brick, and other debris defined by the MassDEP as "urban fill" have been observed throughout the parcels at different intervals in the soil borings. At some locations a layer of organic soils or peat, likely the native ground surface, has been observed at approximately 8 to 12 feet bgs, underlying the fill materials, primarily at Site 1. Due to the historical operations at the Property, and the findings of the investigations completed to date, groundwater was not investigated at this Property. However, the average groundwater elevation throughout the NBMCT is approximately 5 to 6 feet bgs, with groundwater elevations ranging from 7 to 8 feet bgs to as shallow as 3.5 feet bgs.

## 4.5 NATURE AND EXTENT OF CONTAMINATION

Assessment activities have been undertaken at the Property since September 2023 and included site visits, multiple rounds of soil boring advancement, and the collection of soil samples.

Soil investigations completed to date at the Property are described further above in Section 4.1. A summary of the soil data generated to date is presented in Tables 1 through 5, and the laboratory analytical packages are included in Appendix D. The location of the soil borings described herein are depicted on Figures 4 through 10. Soil boring observations and screening results can be found within the Soil Management Plan in Appendix B.

### 4.5.1 PCBs

The following is a summary of the nature and extent of PCBs in soil at the Property; specifically, the extent of PCB-impacted soil located along the southern half of Site 1.

The highest concentration of PCBs was detected in soil boring B0-10E in the hot spot area at Site 1. One soil sample was submitted for analysis from this soil boring, from a depth of 0 to 1 feet bgs. The concentration of PCBs detected in this sample was 3040 mg/kg. The hot spot area at Site 1 is centralized around soil boring B0, located near the southern property boundary. In the hot spot area, PCBs were detected in 21 samples from depths between 0 and 2 feet bgs at concentrations exceeding the TCSA limit of 25 mg/kg. Historical investigations at the southern abutting NBMCT property also identified similar concentrations of PCBs in soils just south of the Site 1 property boundary, in the vicinity of the hot spot. PCBs were detected in soil samples from many other locations across Site 1, outside of the hot spot, at depths ranging from 0 to 5 feet bgs with concentrations ranging from non-detect to 19.9 mg/kg.

The delineation of the horizontal extent of impacts was limited by the southern property line in the hot spot area; however, the horizontal extents of the impacted area have been delineated on all other sides, based on the grid approach completed at the hot spot. The vertical extent was determined by the depth at which samples were detected at PCB concentrations less than 1 mg/kg in the hot spot. The soil borings with soil descriptions are included in the Soil Management Plan in Appendix B. See Figures 5 and 6, and corresponding Table 2 for analytical results.

### 4.5.2 Lead

The following is a summary of the nature and extent of lead in soil at the Property; specifically, the extent of lead-impacted soil located at Site 1.

As described further above in Section 4.1, the highest concentration of lead that triggered a reportable condition during the waste characterization program at Site 1 was a composite sample from soil boring D-8.5, with a concentration of 4,060 mg/kg, which exceeded the RCS-2 reportable concentration for lead. In order to determine if this concentration was representative of the soil at this boring location, ESS recomposited the sample and re-analyzed the sample for lead. The re-analyzed concentration was reported as 73.8 mg/kg, with a note from the lab that no visible debris were seen in the sample. ESS revised the original lab report to report the re-analyzed concentration of 73.8 mg/kg for D-8.5. Additional waste characterization sample locations contained concentrations of lead above or approaching the RCS-2 reportable concentration of 600 mg/kg including composite samples from soil borings E-1 (676 mg/kg) and G-1 (441 mg/kg). Additionally, various composite samples (E-1, E-5, G-1, II-8.5, CEC-1-1, and CEC-2-1) were above the most stringent MCP Method 1 S-1 lead standard of 200 mg/kg (see Figure 7). The lead

exceedances prompted additional delineation to determine the vertical and horizontal extent of the lead impacts at Site 1. A Toxicity Characteristic Leaching Procedure (TCLP) was also performed on samples that exhibited lead concentrations greater than 20 times the TCLP threshold for lead (100 mg/kg). All TCLP results were below the threshold for lead, indicating that these samples can be classified as non-hazardous waste. For vertical delineation, five discrete samples were analyzed at soil boring E-1 between depths of 1 and 10 feet bgs. Sample E-1 (1-2 ft bgs) contained a concentration of 340 mg/kg, sample E-1 (4-5 ft bgs) contained a concentration of 1,890 mg/kg, and sample E-1 (9-10 ft bgs) contained a concentration of 413 mg/kg, all exceeding the MCP Method 1 S-1 standard for lead. Additional samples in the vicinity of soil boring E-1 were also analyzed for lead at depths between 2 and 10 feet bgs. Soil samples from 4 to 5 feet bgs analyzed from soil boring locations C-0, E-2, G-1, and G-2, contained lead concentrations of 4,210 mg/kg, 1,230 mg/kg, 5,420 mg/kg, and 863 mg/kg, respectively. All other samples analyzed were below the MCP Method 1 standard for lead. According to the results, the lead impacts appear to be around the depth of 4 to 5 feet bgs. For horizontal delineation, the lead impacts appear to be focused towards the southeast portion of Site 1, with some impacts scattered at the northwest portion. Discrete soil samples from multiple borings in the southeast impacted area were analyzed for lead between depths of 2 and 10 feet bgs. Soil borings B-1 (4-5 ft bgs), H-1 (4-5 ft bgs), and G-5 (5-6 ft bgs) contained concentrations of 46.3 mg/kg, 89.4 mg/kg, and 46.5 mg/kg, respectively, all below the MCP Method 1 S-1 standard for lead. All other samples analyzed were also below the applicable MCP Method 1 S-1 standard for lead in this area. All soil sample results for lead at Site 1 are found in Table 1.

Although lead exceeded the RCS-2 and MCP Method 1 S-1 standard at various locations and depths, the majority of exceedances appear to be at depths 4 feet bgs or greater. As part of the Site development, soils greater than 1.75 feet bgs are anticipated to remain in place and will be covered by the proposed heavy-lift barrier. Soils that are anticipated for removal or re-use (within the top 1.75 feet bgs) indicate concentrations of lead below the RCS-2 reportable concentration across the Site.

### 4.5.3 SVOCs & Petroleum Hydrocarbons

The following is a summary of the nature and extent of SVOCs and petroleum hydrocarbons in soil at the Property; specifically, at Site 2.

As described further above in Section 4.1, initial investigation sampling indicated concentrations of benzo(a)pyrene, 1,1-biphenyl, acenaphthylene, and phenanthrene above the applicable RCS-1 reportable concentrations across Site 2. A majority of the SVOC and petroleum hydrocarbon impacts are located on the northern half of Site 2 with most of the impacts at depths greater than 7 feet bgs, with some shallower impacts. See Figure 10 for soil boring locations, and corresponding Table 4 for analytical results.

Additionally, at one soil boring location (CEC-8-3) petroleum-like odors and elevated PID readings were observed. Soil sample CEC-8-3 (12-14.5 feet bgs) contained a concentration of 2-methylnaphthalene above the RCS-1 reportable concentration; CEC-8-3 (7-8 feet bgs) contained a concentration of 2,4-dinitrotoluene above the RCS-1 reportable concentration; and CEC-8-3 (7-8 feet bgs) contained a concentration of $C_9$-$C_{10}$ aromatics above the RCS-1 reportable concentration.

It should be noted that the Property is in an area of New Bedford, historically known for industrial operations and use of fill from unknown origins. Additionally, a gasoline station is currently located directly across South Front Street to the west of Site 2, with MassDEP records indicating this property was a historical release site. MassDEP records indicate that a release occurred at this neighboring property in 1987 while the property was occupied by a previous gasoline station, showing elevated detections of VOCs and non-aqueous phase liquids (NAPL) discovered in the soil and groundwater within the disposal site boundary. A remediation system was used to treat the groundwater and condition of 'No Significant Risk' was achieved for the Site. This property is considered to be upgradient of Site 2, with groundwater flow trending in an easterly direction towards New Bedford Harbor. It is CEC's opinion that the petroleum impacts identified in boring CEC-8-3 are most likely associated with the release at the neighboring property.

## 5.0 RELEASE ABATEMENT MEASURE OBJECTIVES, SPECIFIC PLANS AND IMPLEMENTATION SCHEDULE

Pursuant to 310 CMR 40.0444(1)(c), the RAM objectives, specific plans and implementation schedule are discussed below. This RAM Plan will also serve as the Self-Implementing PCB Cleanup Plan per CFR 761.61.

### 5.1 RELEASE ABATEMENT MEASURE OBJECTIVE

As part of the NBMCT Terminal Expansion, the entire project is being completed in multiple phases between 2025 and 2027. The focus of the first phase of construction is Site 1, with Sites 2 and 3 following in the years outlined above. While the focus of the first phase of construction is Site 1, the RAM Plan is being implemented to help facilitate both the remediation of PCBs on Site 1 and general earthwork activities on Sites 1, 2, and 3 in preparation for and during the NBMCT Terminal Expansion at the Property. No specific target soil remediation activities are currently targeted for Sites 2 and 3 at this time. If targeted soil remediation is required on these properties (as opposed to general soil management during construction), a RAM Plan addendum will be provided. This RAM Plan will allow for the management and/or removal of subsurface soils and debris that will be generated during earthwork activities including site preparation and concrete slab demolition, fencing installation, underground utility demolition and installation, drainage installation, installation of foundations for lighting, and general subgrade soil excavations within the Property. All soil will be managed in accordance with the Soil Management Plan (Appendix B).

**Site 1**

This RAM is being implemented to facilitate the removal, re-use, and management of soils from the PCB and lead-impacted areas, specifically on Site 1, that will be generated during specific activities as part of the NBMCT Terminal Expansion. Activities requiring soil removal will include site preparation and concrete slab demolition, fencing installation, underground utility demolition and installation, drainage installation, installation of foundations for lighting, and the excavation of all soils within the top 2.5 feet below grade in the hot spot and within the top 1.75 feet below grade in the remaining areas, in order to accommodate the heavy-life engineered barrier described further above. This RAM will support the expansion of the NBMCT with the goal of eventually achieving a Permanent Solution with Conditions for the Property. Approximately 160 cubic yards of soil with PCB concentrations >25 mg/kg is anticipated to be excavated and transported to a TSCA hazardous waste facility. Approximately 1,100 cubic yards of soil with PCB concentrations between 1 mg/kg and ≤25 mg/kg is anticipated to be excavated and transported to an out of state landfill or re-used on site. Approximately 6,200 cubic yards of soil with PCB concentrations <1 mg/kg is anticipated to be excavated and transported to a COMM-97 landfill or re-used on site.

These areas are depicted on Figure 11. Based upon the above, in this RAM we are seeking approval for the following quantities:

- 250 cy of PCB impacted soils >25 mg/kg
- 1,500 cy of PCB impacted soils between 1 mg/kg and ≤25 mg/kg
- 7,500 cy of soils <RCS-1

Available information suggests that the adjacent Main Terminal was remediated to a depth of at least 3 feet bgs when the Heavy Lift Engineered Barrier was constructed at the facility. CEC anticipates that it will be possible to use visual evidence to identify the extent of the adjacent remediation, and the new remediation area will be extended to minimize the potential for leaving impacted soil between the new and older remediation areas. If visual evidence is insufficient to identify the extent of the prior remediation, additional samples will be collected. With the exception of a narrow strip of possibly a few feet along the southern property boundary of Site 1, no additional material outside of Site 1, as seen on Figure 11, is currently planned for removal during this time, unless deemed geotechnically unsuitable during construction, in which case it will be stockpiled and characterized prior to disposal, if required.

For the purposes of this RAM Plan, all soils mentioned above shall be considered as "Category C" soils under the Soil Management Plan (SMP, see Appendix B). As such, these soils shall require appropriate handling and disposal in accordance with the RAM Plan and SMP unless the material is evaluated based upon both chemical and physical properties and deemed appropriate for reuse by an LSP and geotechnical engineer representing MassCEC. Reuse of any soil with PCB concentrations >1 mg/kg would also require USEPA approval.

## 5.2 RELEASE ABATEMENT MEASURE SPECIFIC PLANS

**Site 1**

As indicated above, the plan is to remove the soil in the excavation area, located at Site 1 and depicted on Figure 11. The horizontal and vertical extent of the excavation has already been determined, as shown by the results in Figures 5 and 6. Due to the extensive delineation samples collected to date, CEC is proposing to use the previously obtained analytical data in lieu of obtaining additional post-excavation verification samples. CEC will collect additional soil samples if unanticipated field conditions determine the need for further soil analysis during the excavation activities or if required by USEPA, except as noted further below. The excavation and management of soil within Site 1 will be performed in accordance with this Release Abatement Measure (RAM) Plan and the attached Soil Management Plan (SMP) (Appendix B). The RAM activities include the proper management and off-Site disposal/reuse of impacted soils and the implementation of best management practices (BMP) to protect construction workers and surrounding receptors from

potential risks as a result of earthwork associated with the RAM. The RAM will also ensure that the development of the Property does not impede the future remediation of Site 1.

Planned excavation activities may advance below the groundwater elevation in some areas but dewatering of the excavation is not anticipated. If groundwater is encountered during excavation, soil will be excavated from the hole "in the wet" and the water will be allowed to drain back into the excavation prior to reuse or off-site disposal. If necessary, groundwater will be moved from one excavation to another within the Property. Soils outside of the Disposal Site boundaries will also be managed in accordance with the Soil Management Plan (SMP) but will not be subject to this RAM Plan.

### 5.2.1 Soil Removal Activities

With respect to the soil containing PCBs at concentrations of >25 mg/kg, the soil may be excavated and loaded directly into lined and covered roll-offs, loaded directly into lined trucks, or first temporarily stockpiled on polyethylene sheeting and covered with the same for subsequent transport to an approved licensed facility for disposal. The observations and results from assessment conducted to date indicate that the removal of soil to depths up to 2.5 feet bgs will be required in the hot spot area to remove soils with PCB concentrations >25 mg/kg. Excavation depths up to 1.75 feet bgs will be required in the remaining areas. CEC anticipates the re-use or removal of a total of ~7,500 cubic yards of soils in total for Site 1, as described further above, to accommodate the proposed heavy-lift engineered barrier. In order to provide flexibility, we are proposing a total of 10,000 cubic yards for this overall RAM Plan. Based on previous assessment, CEC does not anticipate encountering groundwater during the excavation. If groundwater is encountered during excavation, soil will be excavated from the hole 'in the wet' and the water will be allowed to drain back into the excavation prior to reuse or off-site disposal. Any soil that is excavated and not directly loaded into a vehicle will be stockpiled on polyethylene sheeting and covered with the same. Any additional soils that require excavation for other purposes out of the scope of this plan will not be excavated for reuse without first either characterizing the soil under the direction of the LSP or with approval of the LSP and with a plan for ex-situ characterization.

### 5.2.2 Sampling and Analysis Plan

The sampling and analysis plan (SAP) has been developed to meet the requirements of the MassDEP and the USEPA to ensure that the soils with PCB concentrations > 25 mg/kg are removed from the Property within the proposed excavation depth. As described above, due to the extensive delineation samples collected to date, CEC is proposing to use the previously obtained analytical data in lieu of obtaining additional post-excavation verification samples at most locations with the following exceptions;

- Soils to the south of the hot spot along the property line if needed (see section 5.1 for details)
- Soils east of the hot spot in the drainage ditch where data from the neighboring property suggests that additional shallow PCB impacts may remain

CEC will collect additional soil samples if unanticipated field conditions determine the need for further soil analysis during the excavation activities or if required by USEPA.

As described above, prior assessment of soil at Site 1 has been conducted to evaluate the extent of PCB-impacted soils. The extent of excavation has been proposed based on the analytical results from prior soil sample collection and determined by the property boundaries. The extent of the excavation has been divided into 25 by 25 foot grids and 5 by 5 foot grids to satisfy the USEPA sample collection requirements, as depicted on Figures 5 and 6.

Any post excavation samples deemed necessary will be submitted to ESS laboratory for analysis of PCBs. Soil samples will be collected by hand and placed into laboratory-supplied container(s) while wearing dedicated nitrile gloves for each sample location. The samples will be sealed, labelled, and placed in a cooler on ice for delivery to the laboratory under proper chain-of-custody protocol. Although reusable sampling equipment is not anticipated to be utilized, equipment that requires decontamination will be properly decontaminated before collecting samples, as discussed in more detail in the SMP, Appendix B.

If necessary, field duplicate samples will be collected at a rate of 1 per every 20 samples. One matrix spike/matrix spike duplicate (MS/MSD) sample will be collected for every 20 samples collected. Additionally, equipment blank sample(s) will be collected and submitted for laboratory analysis as recommended in the guidance documents if used. Field duplicates and MS/MSD samples will only be analyzed for PCBs.

Samples will be analyzed at a certified laboratory utilizing USEPA SW-846 Method 8082A, upon completion of extraction utilizing USEPA extraction Method 3500C/3540C Soxhlet extraction.

### 5.2.3 Backfill

As part of the NBMCT Terminal Expansion, and to comply with the existing heavy lift engineered barrier on the Main Terminal, the new proposed heavy lift expansion area is required to support a ground bearing pressure of 4,100 pounds per square foot (psf). The intended use of the expansion area will be generally similar to the existing terminal facility which currently stores wind turbine parts and is subject to heavy equipment loading including modular trailers and crawler cranes.

The following is a general description of a likely heavy lift area profile for the purposes of this RAM Plan. It is not a specification and not intended for construction purposes. In order to comply

with these required specifications for the new proposed heavy lift area, and upon completion of excavation (and confirmatory sample collection, if needed), the subgrade will be compacted to at least 95% of the maximum dry density and within 3% of the optimum moisture content as determined by ASTM D1557 (Modified Proctor), and to visual non-movement. Once these specifications are met, one layer of Tensar Interax NXF geogrid will be placed at this proposed grade and backfilled with approximately 9" of imported select gravel fill, followed by a second layer of Tensar Interax NXF geogrid, and finished with 9" of select gravel fill up to final proposed grade.

#### 5.2.4 Cap / Focused Feasibility Discussion

As noted above, the new proposed profile for the heavy lift area may be reduced from the 3 foot profile provided on the Main Terminal to a reduced 18-inch minimum profile. Based upon the soil removal proposed and the soil concentrations that will remain after conducting this remediation/construction effort, it is CEC's opinion that a true "Engineered Barrier" will not be required at Site 1. In fact, it is our opinion based upon preliminary risk evaluation that future risk assessment will support achievement of a Permanent Solution at Site 1 without the need for any engineered barrier or cap. It is possible that MassCEC may implement the voluntary use of a cap for consistency of facility management. Given the above, it is CEC's opinion that a Phase III or focused feasibility study is not required in this case to build this "cap." Furthermore, the construction of this cap will not impede any future remedial efforts.

## 5.3 PROPOSED RELEASE ABATEMENT MEASURE IMPLEMENTATION SCHEDULE

| ITEM | ANTICIPATED DATE |
|---|---|
| RAM Plan Submittal | March 2025 (No Approval Period) |
| Self-Implementing PCB Cleanup Plan Submittal (concurrent with RAM Plan) | March 2025 (30-day USEPA Approval Period) |
| Revised RAM and PCB Clean-up Plan | May 2025 |
| Soil Excavation, Transport, Disposal | Summer through Fall 2025 (Upon USEPA Approval) |
| RAM Status Reports | 120 days from submittal and every six months thereafter |
| RAM Completion Report | Within 60 days of completion of work |

## 6.0 GREENER CLEANUPS

Both MassDEP and USEPA require the consideration of measures that can be taken to ensure Greener Cleanups. CEC has evaluated the proposed remedial alternative in consideration of MassDEP's Greener Cleanup Guidance document WSC #14-150, the ASTM Standard Guide for Greener Cleanups (E2893 – 13), and the MCP Response Action Performance Standards (RAPS).

Best Management Practices (BMPs) to be implemented during these response actions may include having the cleanup and transportation contractors follow an idle-reduction policy or may include the use of heavy equipment with advanced emissions controls operated on ultra-low sulfur diesel. Other BMPs would be to limit the mobilizations of equipment, implementation of erosion control, and re-use of supplies (i.e. plastic sheets, drums, etc.) when possible. To the extent possible, local contractors and materials (backfill) will be used to reduce carbon emissions and fuel consumption. Dedicated sampling equipment (gloves, spoons) will be used to reduce the need to generate contaminated decontamination fluid.

## 7.0 MANAGEMENT OF REMEDIAL WASTE, REMEDIAL WASTEWATER AND/OR REMEDIAL ADDITIVES

Pursuant to 310 CMR 40.0444(1) (d), the management of remediation waste, is discussed below, there are no anticipated remedial wastewater and/or remedial additives therefore they are not discussed.

### 7.1 PCB SOILS >25 MG/KG AND ASSOCIATED WASTES

As described above, one objective of this RAM Plan/TSCA Cleanup Plan is to properly remove and manage soil containing PCBs to support the NBMCT Terminal Expansion and to facilitate expansion of the NBMCT. This RAM Plan is designed to reduce the PCB concentrations to ≤25 mg/kg to achieve the remedial goal of the USEPA Self-Implementation Plan and to allow low-occupancy use of the Property. Up to 160 cubic yards of impacted soil will be removed and disposed of at a licensed RCRA Subtitle C or TSCA landfill. Soil shall be managed in accordance with the SMP in Appendix B.

Soil with a concentration > 25 mg/kg at the hot spot will be excavated, placed in lined rolloffs or dump trailers, covered, and transported off-Site under a USEPA Hazardous Waste Manifest and in compliance with applicable USEPA and Department of Transportation (DOT) regulations. The PCB Remediation Waste will be transported under manifest to a TSCA permitted Chemical Waste Landfill for disposal. In addition, the polyethylene sheeting, and/or reinstate generated during the project will be drummed, transported, and disposed of at an appropriately licensed facility, which is likely to be the facility listed below.

Wayne Disposal Inc.
49350 North 1-96 Service Drive
Belleville, MI 48111
Phone: (800) 592-5489 Permit No. MID04090633

Stockpiling of excavated soil or temporary storage of rolloffs prior to transport is not anticipated. However, if this becomes necessary due to scheduling, the proposed stockpile/storage area, which will be contained within the fenced area of the Property, will be located on remaining paved portions of Site 1. All rolloffs/trailers will be covered at the end of the workday. If stockpiles are utilized, they will be placed on pavement on polyethylene sheeting and covered with the same. The sheeting will be weighed down and absorbent materials will be placed around the stockpiles.

## 7.2 PCB SOILS >1 MG/KG AND ≤25 MG/KG AND ASSOCIATED WASTES

Soil with a concentration of >1 mg/kg and ≤25 mg/kg, outside of the hot spot, will either be re-used on site appropriately, or will be excavated, placed in lined rolloffs or dump trailers, covered, and transported off-Site under a bill of lading (BOL) and in compliance with applicable USEPA and Department of Transportation (DOT) regulations. Soil shall be managed in accordance with the SMP in Appendix B.

Stockpiling of excavated soil or temporary storage of rolloffs prior to transport is not anticipated. However, if this becomes necessary due to scheduling, the proposed stockpile/storage area, which will be contained within the fenced area of the Property, will be located on remaining paved portions of Site 1. All rolloffs/trailers will be covered at the end of the workday. If stockpiles are utilized, they will be placed on pavement on polyethylene sheeting and covered with the same. The sheeting will be weighed down and absorbent materials will be placed around the stockpiles.

## 7.3 OTHER SOILS

All other soils are to be managed in accordance with the SMP in Appendix B.

## 8.0 ENVIRONMENTAL MONITORING PLAN

Pursuant to 310 CMR 40.0444(1)(e), an Environmental Monitoring Plan will be implemented during the soil removal activities. the Licensed Site Professional (LSP) and/or the LSP's representative will be present during the management of impacted soil, in part, to evaluate ambient air conditions. Significant odors, vapors and/or dust are not anticipated; however, dust monitoring will be performed that will consist of continuous visual monitoring and documenting the site conditions during the soil removal activities. Work zone air quality will be evaluated by CEC staff for the presence of dust, odors, and vapors by visual, and olfactory monitoring, and by screening the air with a photoionization detector (PID) and a handheld particle counter/dust monitor to quantify work zone dust concentrations.

During the excavation of all soils containing >1 mg/kg of PCBs, perimeter air monitoring will be conducted to ensure that the work is not resulting in unacceptable levels of dust at nearby receptors. Continuous air monitoring will be performed during the excavation and management of PCB-impacted soil.

Four stationary ambient air monitoring stations will be utilized during the excavation activities at various locations. Each station will consist of a real-time continuous monitor for $PM_{10}$. Proposed stationary air monitoring locations are depicted on Figure 4. Continuous particulate monitoring will be performed using real-time particulate monitors such as a DustTrak II™ 8530, QuantAQ Modulair-PM/NorAm (or equivalent) and shall monitor particulate matter less than ten microns ($PM_{10}$).

In addition to the fixed stations, a handheld dust monitor will be used to monitor dust levels upwind of and at various locations across the work area. The handheld monitor allows for monitoring at the limits of soil disturbance in the vicinity of the area where excavation is occurring to allow for the evaluation of a worst-case scenario of dust being generated and effectiveness of dust suppression techniques. The Contractor will be responsible for conducting air monitoring within the excavation areas/work zones to satisfy federal, state and local laws and regulations and to meet the requirements of Occupational Health and Safety Administration (OSHA) regulations.

If respirable particulate matter ($PM^{10}$) readings are greater than 100 micrograms per cubic meter ($\mu g/m^3$), as compared to ambient background, mitigation steps will be implemented to reduce the concentrations in the air. This may include the contractor spraying water in the active areas to suppress the dust levels. If the water is inadequate, an alternative will be evaluated. If concentrations are greater than 150 µg/m3, as compared to ambient background, then work will be halted for re-evaluation and best management practices; or, other means of dust suppression will be implemented until the concentrations are reduced to less than 100 µg/m3.

## 9.0 PERMITS

Pursuant to 310 CMR 40.0444(1) (f), federal, state, and local permitting required for this RAM are discussed below.

CEC is not aware of any permits specific to remedial activities that are required to implement this RAM Plan. However, the contaminated soil will be removed and managed in compliance with the applicable TSCA regulations for the cleanup and disposal of PCB contamination. CEC understands that this RAM Plan can be submitted to satisfy the requirements of a Self-Implementing Cleanup Plan under TSCA. Therefore, this Plan will be submitted to the USEPA under a separate cover for their review and approval.

## 10.0 SEAL AND SIGNATURE OF THE LICENSED SITE PROFESSIONAL

Pursuant to 310 CMR 40.0444(1)(g), the seal and signature of the LSP who prepared this RAM Plan is included on the RAM Transmittal Form BWSC-106, which is being submitted via eDEP concurrently with this report. An unsigned copy of form BWCS-106 is included in Appendix C.

## 11.0 PUBLIC INVOLVEMENT

Pursuant to 310 CMR 40.1403 (3) (d), local officials are being provided with a letter notifying them of this RAM Plan within 20 days prior to the implementation of the work. A copy of the notification letter that will be sent to the local officials is included in Appendix E.

## 12.0 LIMITATIONS

The opinions and conclusions expressed herein have been developed as a result of site assessment, field observations and research by CEC personnel. CEC makes no claims or representations (implicit or explicit) as to the completeness or accuracy of information or data developed and provided by others.

The boring logs and related information presented in this report depict subsurface conditions at the test locations and at the time of the test pit and drilling activities. Soil conditions at other locations may differ. Geologic correlations shown on borings generally are based on straight-line interpolation. Actual conditions between test locations may differ.

Opinions developed may include certain forward-looking statements or positions that may involve a number of calculated risks and/or uncertainties. For the purpose of the Opinions rendered herein, any statement that is not deemed to be historical fact or documented data, including without limitation any statement using the term believes, intends or similar expression, is a forward-looking statement. Among the important factors that could cause the Opinions to differ from those stated are, but not limited to, the passage of time, changes in technology, regulatory revisions, manifestations of latent conditions or future events. These factors et.al. may render, solely by virtue of becoming evident, the Opinions contained herein inaccurate or otherwise inapplicable within and based on the context and content of the original information. Neither CEC nor an LSP in its employ shall be liable or responsible for the effect of any changes in circumstance which may affect the usability of the Opinions rendered. CEC reserves the right to change its opinions, conclusions, and/or recommendations should new data become available which would indicate that the information provided to and relied upon at the time of the report preparation by CEC was incomplete, inaccurate, incorrect or otherwise deficient. Events occurring on or near the Disposal Site after the noted site inspections are beyond the scope and context of this report.

CEC is not responsible for permit fees, compliance fees and/or non-compliance penalties assessed by the MassDEP unless expressly stated. Fees and penalties are invoiced by and payable directly to the MassDEP.

For services provided by a LSP, including Opinions rendered as provided by the MCP, documents filed with DEP may be audited after the date of filing. In the event that the Site is selected for an audit, the PRP remains responsible for complying with the MassDEP requirements associated with the Site audit.

# FIGURES

Civil & Environmental Consultants, Inc.

31 Bellows Road
Raynham, MA 02767

Ph: 774.501.2176

www.cecinc.com

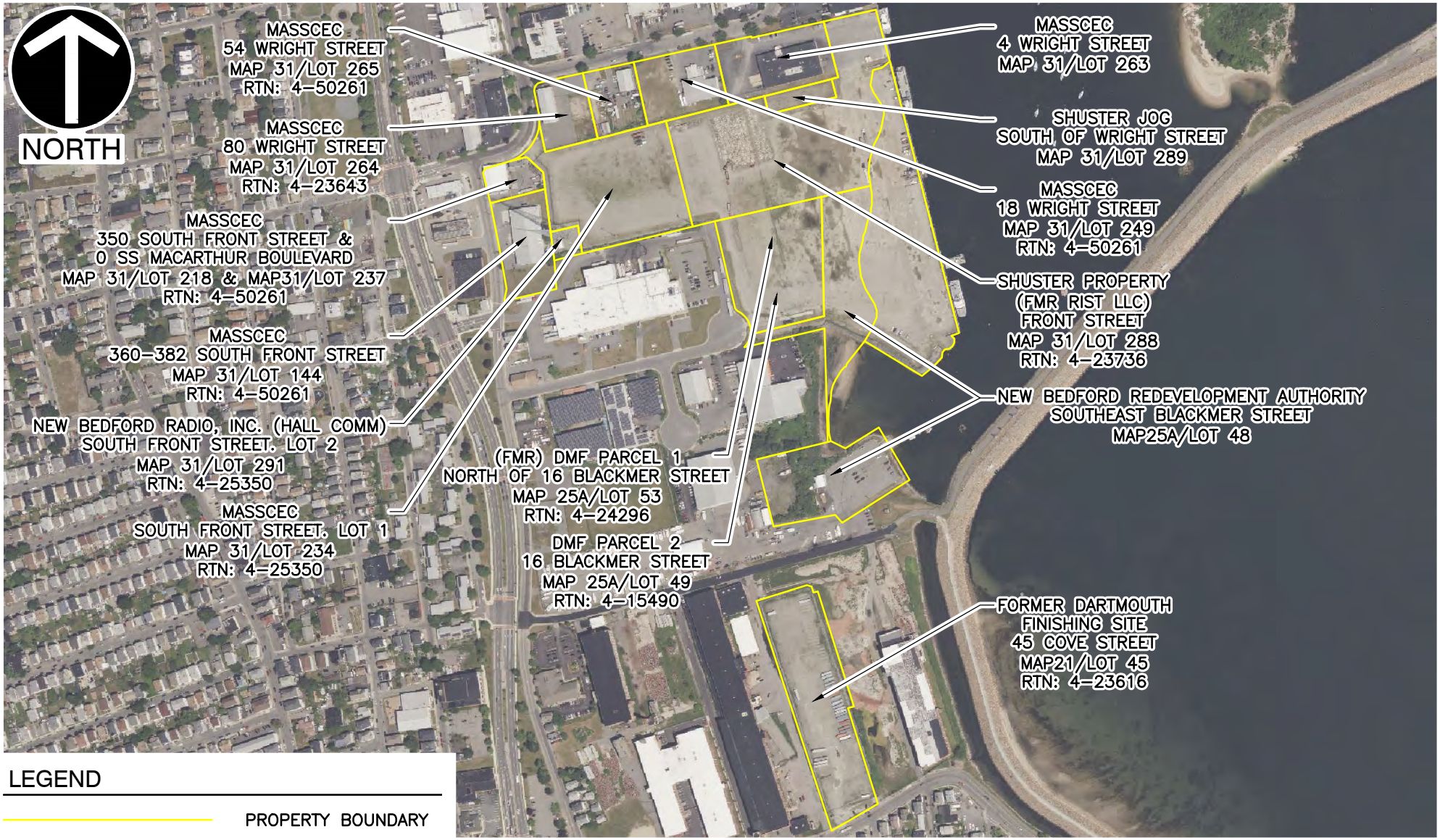
MASSACHUSETTS CLEAN ENERGY CENTER
FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
NEW BEDFORD, MASSACHUSETTS

SITE LOCUS MAP

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | FIGURE NO.: | 1 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=4,000' | PROJECT NO: | 332-344 | | |

P:\330-000\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-Site Locus.dwg[FIGURE 1] LS:(3/6/2025 - abucco) - LP: 3/19/2025 4:06 PM

P:\330-000\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-Release Abatement.dwg{FIGURE 2} LS:(3/19/2025 - abucco) - LP: 3/31/2025 8:35 AM




LEGEND

PROPERTY BOUNDARY

SCALE IN FEET

0 500 1,000


Civil & Environmental Consultants, Inc.

31 Bellows Road
Raynham, MA 02767

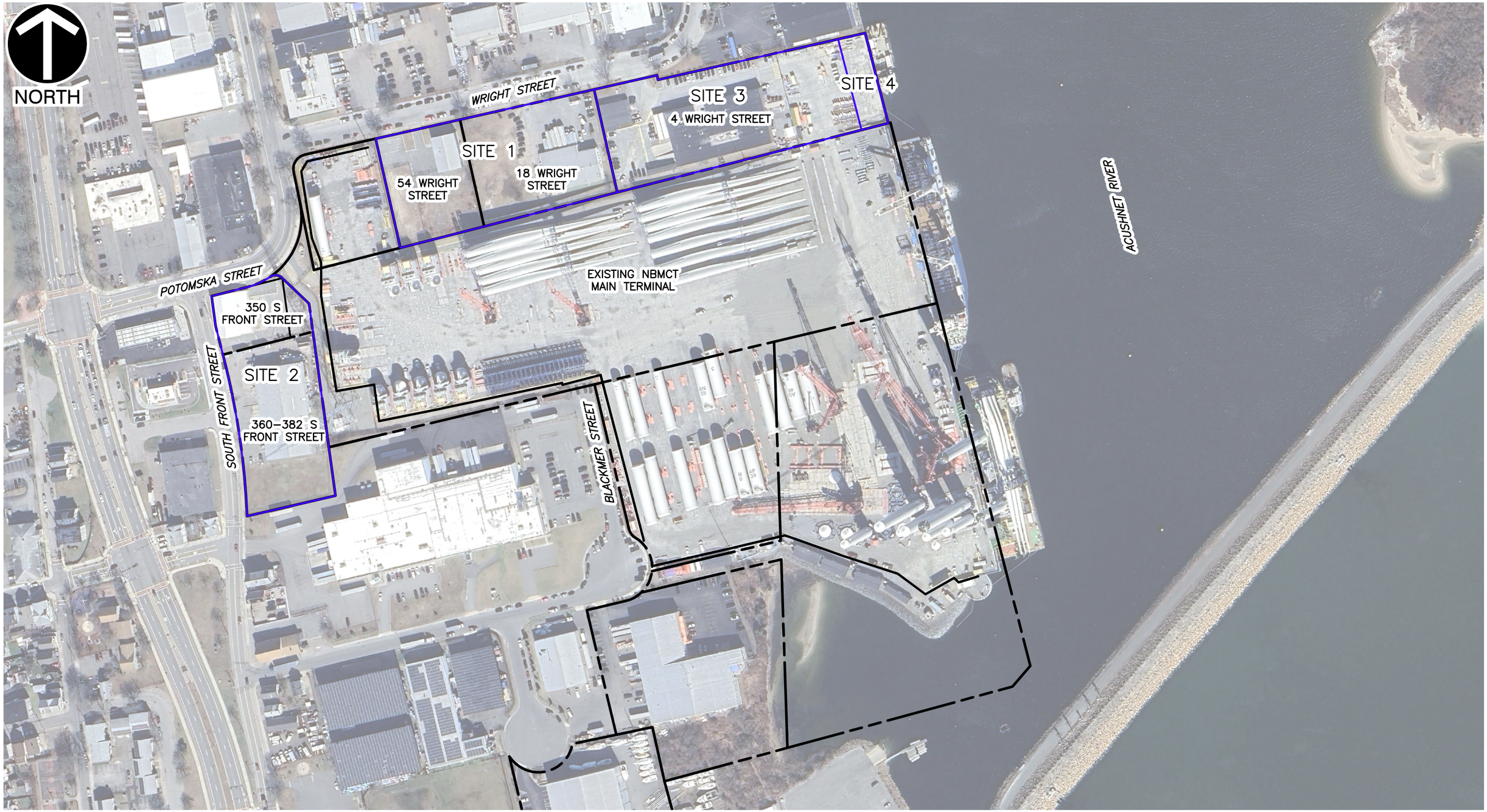
Ph: 774.501.2176

www.cecinc.com


MASSACHUSETTS CLEAN ENERGY CENTER
FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
NEW BEDFORD, MASSACHUSETTS

NBMCT PARCEL OVERVIEW MAP

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | FIGURE NO.: | 2 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=500' | PROJECT NO: | 332-344 | | |




## LEGEND

- PROPOSED EXPANSION AREA
- PROPERTY LINE

SCALE IN FEET

0 200 400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NEW BEDFORD, MASSACHUSETTS

NBMCT TERMINAL EXPANSION
"SITE" BOUNDARY MAP

| | | | | | | |
|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | FIGURE NO.: 3 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=200' | PROJECT NO: | 332-344 | |

P:\330-000\332-344\-CADD\Dwg\ENO4 - Soil Remediation\332344-ENO4-NBMCT Terminal Expansion Site Boundaries.dwg[FIGURE 3] LS:(3/12/2025 - abucco) - LP: 3/19/2025 4:09 PM

NORTH

WRIGHT STREET

MM LL KK JJ II HH GG FF EE DD CC BB AA A B C D E F G H I J K L

-9 -8 -7 -6 -5 -4 -3 -2 -1 0 1

CEC-1-1 II-8.5 CEC-2-1 EE-8.5 AA-8.5 D-8.5 CEC 2-2 H-8.5 CEC 3-2

HH-7 FF-7 DD-7 BB-7 A-7 C-7 E-7 G-7 I-7 CEC-1-2

54 WRIGHT STREET

JJ/II-6 GATE BB-6 AA-6 A-6 B-6 C-6

HH-5 FF-5 DD-5 BB-5 AA-5 A-5 B-5 C-5 E-5 G-5 I-5

GATE CEC-5-1

4 WRIGHT STREET

80 WRIGHT STREET CEC-4-1 BB-4 AA-4 A-4 B-4 C-4 D-4

18 WRIGHT STREET

HH-3 FF-3 DD-3 BB-3 AA-3 A-3 B-3 C-3 D-3 E-3 G-3 I-3

JJ/II-2 GG-2 FF-2 EE-2 DD-2 CC-2 BB-2 AA-2 A-2 B-2 C-2 D-2 E-2 F-2 G-2 CEC 6-2

BB-1 A-1

HH-1 GG-1 FF-1 EE-1 DD-1 CC-1 AA-1 B-1 C-1 D-1 E-1 F-1 G-1 H-1 I-1

CEC-3-1 CEC-7-2 CEC-4-2 CEC-8-2 CEC 5-2

JJ0 II0 HH0 GG0 FF0 EE0 CC0 BB0 AA0 A0 B0 C0 D0 E0 F0 G0 H0 I0.5 J0

JJ0.5 II0.5 HH-0.5 EE0.5 DD0 AA0.5 A0.5 B0-10S C0.5 D0.5 E0.5 F0.5 G0.5 H0.5

NBMCT PROPERTY

HOT SPOT AREA (SEE FIGURE 6)

NBMCT PROPERTY

## LEGEND

| | |
|---|---|
| AA-0 | SOIL BORING LOCATION – PCB ANALYSIS – DECEMBER 2023 THROUGH MAY 2024 |
| AA-0 | SOIL BORING LOCATION – WASTE CHARACTERIZATION ANALYSIS – APRIL 2024 THROUGH MAY 2024 |
| CEC-0-0 | SOIL BORING LOCATION PCB, MCP METALS, & SVOC ANALYSIS – NOVEMBER 2024 THROUGH DECEMBER 2024 |
| | EXISTING PROPERTY LINE |
| ▲ | PROPOSED AIR/DUST MONITORING LOCATION |
| | 50'x50' GRID SPACING |
| | 25'x25' GRID SPACING |

SCALE IN FEET

0 40 80


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SITE 1 BORING LOCATION PLAN AND SAMPLING GRID

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | EXHIBIT: | 4 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=40' | PROJECT NO: | 332-344 | | |

P:\330-0001\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-Soil Remediation Figures.dwg[FIGURE 4] LS:(3/12/2025 - abucco) - LP: 3/19/2025 4:18 PM

WRIGHT STREET

NORTH

80 WRIGHT STREET

54 WRIGHT STREET

18 WRIGHT STREET

4 WRIGHT STREET

NBMCT PROPERTY

NBMCT PROPERTY

HOT SPOT AREA (SEE FIGURE 6)

## LEGEND

| | |
|---|---|
| AA–0 | SOIL BORING LOCATION – PCB ANALYSIS – DECEMBER 2023 THROUGH MAY 2024 |
| ⊕ AA–0 | SOIL BORING LOCATION – WASTE CHARACTERIZATION ANALYSIS – APRIL 2024 THROUGH MAY 2024 |
| CEC–0–0 | SOIL BORING LOCATION PCB, MCP METALS, & SVOC ANALYSIS – NOVEMBER 2024 THROUGH DECEMBER 2024 |
| | EXISTING PROPERTY LINE |
| | 50'x50' GRID SPACING |
| | 25'x25' GRID SPACING |

DISCRETE SAMPLE DEPTH (FEET BELOW GROUND SURFACE)

| | RESULT |
|---|---|
| 0–1 | PCB RESULT <1MG/KG |
| 1–2 | PCB RESULT 1 ≤ 25MG/KG |
| 2–3 | PCB RESULT >25MG/KG |
| 3–4 | NO SAMPLE ANALYZED |
| 4–5 | |
| 5–10 | |

COMPOSITE SAMPLE DEPTH (FEET BELOW GROUND SURFACE)

| | RESULT |
|---|---|
| 0–5 | PCB COMPOSITE SAMPLE WITHIN THIS DEPTH RANGE |
| 5–10 | PCB COMPOSITE SAMPLE WITHIN THIS DEPTH RANGE |

SCALE IN FEET

0 40 80


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SITE 1 SOIL RESULTS - PCBS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | EXHIBIT: | 5 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=40' | PROJECT NO: | 332-344 | | |

P:\330-000\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-Soil Remediation Figures.dwg[FIGURE 5] LS:(3/12/2025 - abucco) - LP: 3/19/2025 4:18 PM

NORTH

A–1
B–1
C–1
25'
25'
5'
5'
A0–20N20W
A0–20N10W
CEC–7–2
CEC–4–2
B0–20N15W
B0–15N15W
CEC–8–2
B0–10N15W
B0–20N15E
B0–15N15E
B0–10N15E
B0–10N
B0–5N
AA0
A0–20W
A0–15W
A0–10W
A0–5W
A0
B0–20W
B0–15W
B0–10W
B0–5W
B0
B0–5E
B0–10E
B0–15E
B0–20E
C0
B0–5S
AA0.5
A0.5
B0–10S15W
B0–10S
B0–10S15E
C0.5

## LEGEND

- AA–0 — SOIL BORING LOCATION – PCB ANALYSIS – DECEMBER 2023 THROUGH MAY 2024
- AA–0 — SOIL BORING LOCATION – WASTE CHARACTERIZATION ANALYSIS – APRIL 2024 THROUGH MAY 2024
- CEC–0–0 — SOIL BORING LOCATION PCB, MCP METALS, & SVOC ANALYSIS – NOVEMBER 2024 THROUGH DECEMBER 2024
- EXISTING PROPERTY LINE
- 50'x50' GRID SPACING
- 25'x25' GRID SPACING
- 5'x5' GRID SPACING

DISCRETE SAMPLE DEPTH (FEET BELOW GROUND SURFACE)

| | RESULT |
|---|---|
| 0–1 | PCB RESULT <1MG/KG |
| 1–2 | PCB RESULT 1 ≤ 25MG/KG |
| 2–3 | PCB RESULT >25MG/KG |
| 3–4 | NO SAMPLE ANALYZED |
| 4–5 | |
| 5–10 | |

COMPOSITE SAMPLE DEPTH (FEET BELOW GROUND SURFACE)

| | RESULT |
|---|---|
| 0–5 | PCB COMPOSITE SAMPLE WITHIN THIS DEPTH RANGE |
| 5–10 | PCB COMPOSITE SAMPLE WITHIN THIS DEPTH RANGE |

SCALE IN FEET
0 5 10


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SITE 1 HOT SPOT SOIL RESULTS - PCBS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | EXHIBIT: | 6 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=5' | PROJECT NO: | 332-344 | | |

P:\330-000\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-Soil Remediation Figures.dwg[FIGURE 6] LS:(3/12/2025 - abucco) - LP: 3/19/2025 5:04 PM

NORTH

WRIGHT STREET

MM LL KK JJ II HH GG FF EE DD CC BB AA A B C D E F G H I J K L

9 8 7 6 5 4 3 2 1 0 1

CEC-1-1 II-8.5 | CEC-2-1 EE-8.5 | AA-8.5 | D-8.5 CEC 2-2 | H-8.5 CEC 3-2

HH-7 FF-7 DD-7 BB-7 A-7 C-7 E-7 G-7 I-7

CEC-1-2

54 WRIGHT STREET

JJ/II-6 GATE | BB-6 AA-6 A-6 B-6 C-6

HH-5 FF-5 DD-5 BB-5 AA-5 A-5 B-5 C-5 E-5 G-5 I-5

GATE CEC-5-1

80 WRIGHT STREET

CEC-4-1

4 WRIGHT STREET

BB-4 AA-4 A-4 B-4 C-4 D-4

18 WRIGHT STREET

HH-3 FF-3 DD-3 BB-3 AA-3 A-3 B-3 C-3 D-3 E-3 G-3 I-3

JJ/II-2 GG-2 FF-2 EE-2 DD-2 CC-2 BB-2 AA-2 A-2 B-2 C-2 D-2 E-2 F-2 G-2

CEC 6-2

BB-1 A-1

HH-1 GG-1 FF-1 EE-1 DD-1 CC-1 AA-1 B-1 C-1 D-1 E-1 F-1 G-1 H-1 I-1

CEC-3-1 CEC-7-2 CEC-4-2 CEC-8-2

CEC 5-2

JJ0 II0 HH0 GG0 FF0 EE0 CC0 BB0 AA0 A0 B0 C0 D0 E0 F0 G0 H0 I0.5 J0

JJ0.5 II0.5 HH-0.5 EE0.5 DD0 AA0.5 A0.5 B0-10S C0.5 D0.5 E0.5 F0.5 G0.5 H0.5

NBMCT PROPERTY

NBMCT PROPERTY

## LEGEND

| | |
|---|---|
| AA-0 | SOIL BORING LOCATION – PCB ANALYSIS – DECEMBER 2023 THROUGH MAY 2024 |
| AA-0 | SOIL BORING LOCATION – WASTE CHARACTERIZATION ANALYSIS – APRIL 2024 THROUGH MAY 2024 |
| CEC-0-0 | SOIL BORING LOCATION PCB, MCP METALS, & SVOC ANALYSIS – NOVEMBER 2024 THROUGH DECEMBER 2024 |
| | EXISTING PROPERTY LINE |
| | 50'x50' GRID SPACING |
| | 25'x25' GRID SPACING |
| | APPROXIMATE AREA OF LEAD CONCENTRATIONS >200 MG/KG |

SCALE IN FEET

0 40 80


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SITE 1 SOIL RESULTS - LEAD

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | EXHIBIT: | 7 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=40' | PROJECT NO: | 332-344 | | |

P:\330-0001\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-Soil Remediation Figures.dwg[FIGURE 7] LS:(3/12/2025 - abucco) - LP: 3/19/2025 4:21 PM

NORTH

WRIGHT STREET

EXISTING 30.00' DRAINAGE EASEMENT

EXISTING 30.00' DRAINAGE EASEMENT

Q–7 S–7 U–7 W–7 Y–7 C'–7 E'–7

A'–7

Y–5 A'–5 C'–5 E'–5

EXISTING BULKHEAD

K–4.5 L/M–4.5

K–3

18 WRIGHT STREET

4 WRIGHT STREET

Y–3 A'–3 C'–3 E'–3

Y–0.5

C'–1 E'–1

K–1 L/M–1

A'–1

O–0.5 Q–0.5 S–0.5 U–0.5 W–0.5

LO MO NO

NBMCT PROPERTY

SCALE IN FEET

0 50 100

## LEGEND

| | |
|---|---|
| AA–0 | SOIL BORING LOCATION – PCB ANALYSIS – JULY 2024 |
| — — — — — | 50'x50' GRID SPACING |
| - - - - - - | 25'x25' GRID SPACING |


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NEW BEDFORD, MASSACHUSETTS

SITE 3 BORING LOCATION PLAN AND SAMPLING GRID

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | EXHIBIT: | 8 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=50' | PROJECT NO: | 332-344 | | |

P:\330-000\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-Soil Remediation Figures.dwg[FIG8] LS:(3/19/2025 - abucco) - LP: 3/25/2025 1:13 PM

NORTH

WRIGHT STREET

EXISTING 30.00' DRAINAGE EASEMENT

EXISTING 30.00' DRAINAGE EASEMENT

Q–7 S–7 U–7 W–7 Y–7 C'–7 E'–7

A'–7

Y–5 A'–5 C'–5 E'–5

EXISTING BULKHEAD

K–4.5 L/M–4.5

K–3

18 WRIGHT STREET

4 WRIGHT STREET

Y–3 A'–3 C'–3 E'–3

Y–0.5

C'–1 E'–1

K–1 L/M–1

A'–1

O–0.5 Q–0.5 S–0.5 U–0.5 W–0.5

LO MO NO

NBMCT PROPERTY

SCALE IN FEET

0 50 100

## LEGEND

AA–0 — SOIL BORING LOCATION – PCB ANALYSIS – JULY 2024

50'x50' GRID SPACING

25'x25' GRID SPACING

DISCRETE SAMPLE DEPTH (FEET BELOW GROUND SURFACE)

| RESULT | |
|---|---|
| 0–1 | PCB RESULT <1MG/KG |
| 1–2 | PCB RESULT 1 ≤ 25MG/KG |
| 2–3 | PCB RESULT >25MG/KG |
| 3–4 | NO SAMPLE ANALYZED |
| 4–5 | |
| 5–10 | |

COMPOSITE SAMPLE DEPTH (FEET BELOW GROUND SURFACE)

| RESULT | |
|---|---|
| 0–5 | PCB COMPOSITE SAMPLE WITHIN THIS DEPTH RANGE |
| 5–10 | PCB COMPOSITE SAMPLE WITHIN THIS DEPTH RANGE |


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SITE 3 SOIL RESULTS - PCBS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | EXHIBIT: | 9 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=50' | PROJECT NO: | 332-344 | | |

P:\330-0001\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-Soil Remediation Figures.dwg[FIGURE 9] LS:(3/19/2025 - abucco) - LP: 3/25/2025 1:14 PM

NORTH

SOUTH FRONT STREET

CEC 5–4
CEC 6–4
CEC–7–4
CEC 1–4
CEC 4–3
CEC–8–3
350 SOUTH FRONT STREET
CEC–14–4
CEC–8–4
POTOMSKA STREET
360 SOUTH FRONT STREET
CEC–5–3
CEC 2–3
CEC–9–4
CEC–6–3
CEC–15–4
CEC 2–4
CEC–7–3
CEC–3–3
CEC–10–4
NBMCT PROPERTY

## LEGEND

CEC–11–4 — EXISTING SOIL BORING LOCATION – DECEMBER 2023 THROUGH SEPTEMBER 2024

50'x50' GRID SPACING

25'x25' GRID SPACING

SCALE IN FEET

0 40 80


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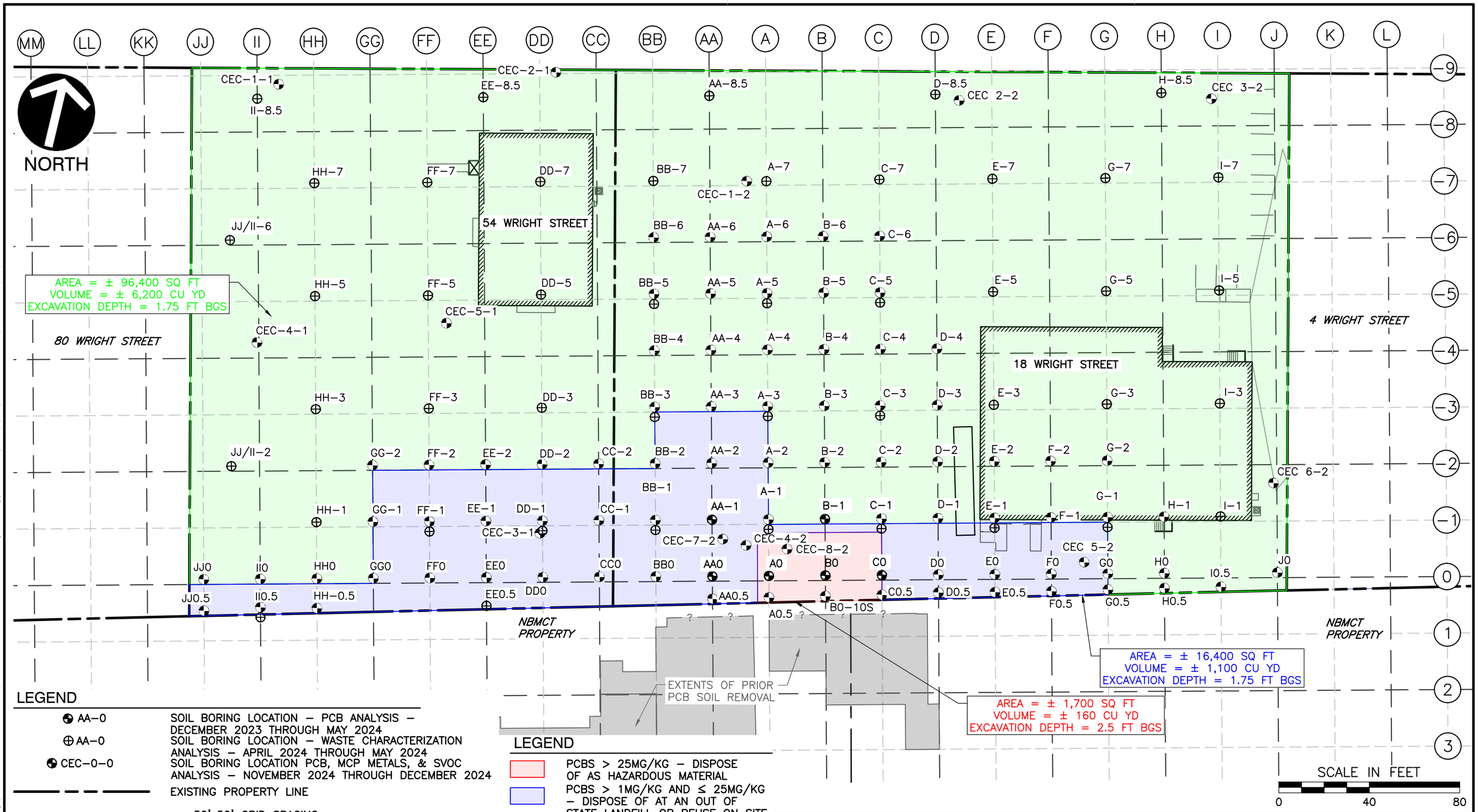
SITE 2 - BORING LOCATION PLAN AND SAMPLING GRID

| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | EXHIBIT: |
|---|---|---|---|---|---|---|
| DATE: | MARCH 2025 | DWG SCALE: | 1"=40' | PROJECT NO: | 332-344 | 10 |


P:\330-000\332-344\-CADD\Dwg\EN06 - Site 2\332344-EN06-Site 2-Boring Location Plan.dwg[FIGURE 10] LS:(3/6/2025 - abucco) - LP: 3/19/2025 5:05 PM




## LEGEND

- AA–0 — SOIL BORING LOCATION – PCB ANALYSIS – DECEMBER 2023 THROUGH MAY 2024
- ⊕ AA–0 — SOIL BORING LOCATION – WASTE CHARACTERIZATION ANALYSIS – APRIL 2024 THROUGH MAY 2024
- CEC–0–0 — SOIL BORING LOCATION PCB, MCP METALS, & SVOC ANALYSIS – NOVEMBER 2024 THROUGH DECEMBER 2024
- EXISTING PROPERTY LINE
- 50'x50' GRID SPACING
- 25'x25' GRID SPACING

DISCRETE SAMPLE DEPTH (FEET BELOW GROUND SURFACE)

| | RESULT |
|---|---|
| 0–1 | PCB RESULT <1MG/KG |
| 1–2 | PCB RESULT 1 ≤ 25MG/KG |
| 2–3 | PCB RESULT >25MG/KG |
| 3–4 | NO SAMPLE ANALYZED |
| 4–5 | |
| 5–10 | |

## LEGEND

- PCBS > 25MG/KG – DISPOSE OF AS HAZARDOUS MATERIAL
- PCBS > 1MG/KG AND ≤ 25MG/KG – DISPOSE OF AT AN OUT OF STATE LANDFILL OR REUSE ON SITE
- PCBS < 1MG/KG – DISPOSE OF AT A COMM–97 LANDFILL OR REUSE ON SITE

COMPOSITE SAMPLE DEPTH (FEET BELOW GROUND SURFACE)

| | RESULT |
|---|---|
| 0–5 | PCB COMPOSITE SAMPLE WITHIN THIS DEPTH RANGE |
| 5–10 | PCB COMPOSITE SAMPLE WITHIN THIS DEPTH RANGE |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NEW BEDFORD, MASSACHUSETTS

SITE 1 SOIL EXCAVATION CHARACTERIZATION AREAS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | EXHIBIT: | 11 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=40' | PROJECT NO: | 332-344 | | |

P:\330-000\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-Soil Remediation Figures.dwg{FIGURE 11} LS:(3/12/2025 - abucco) - LP: 3/19/2025 4:44 PM

# TABLES

Table 1
Site 1 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **A-1** | **A-3** | **A-5** | **A-7** | **AA-8.5** | **B-1** | **B-2** | **B0** | **BB-1** | **BB-3** | **BB-5** | **BB-7** | **C-1** | **MCP Concentrations** | |
| Sample ID | A-1 | A-3 | A-5 | A-7 | **AA-8.5** | B-1 4-5 | B-2 2-3 | B0 3-4 | BB-1 | BB-3 | BB-5 | BB-7 | C-1 | | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 4-5 | 2-3 | 3-4 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 4/30/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 5/2/2024 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 24E0050-03 | 24E0050-02 | 24E0050-01 | 24E0050-05 | 24E0026-09 | 24E0051-15 | 24F0473-01 | 24E0814-06 | 24E0026-08 | 24E0026-07 | 24E0026-06 | 24E0026-05 | 24E0124-01 | | |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | | |
| Acetone | < 0.043 | < 0.048 | < 0.048 | < 0.060 | < 0.046 | -- | -- | -- | < 0.056 | < 0.049 | < 0.050 | < 0.047 | < 0.054 | 6 | 50 |
| Naphthalene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | -- | -- | -- | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 4 | 20 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | -- | -- | -- | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 0.05 | 6 |
| 2-Methylnaphthalene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 80 |
| Acenaphthylene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.48 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 2 | 10 |
| Anthracene | < 0.29 | 1.41 | < 0.28 | < 0.28 | 0.67 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 1000 | 3000 |
| Benzo(A)anthracene | 0.33 | 7.33 | 0.51 | < 0.28 | 2.38 | -- | -- | -- | 0.45 | 0.32 | 0.28 | < 0.28 | < 0.28 | 20 | 300 |
| Benzo(A)pyrene | 0.35 | 7.30 | 0.52 | < 0.28 | 2.33 | -- | -- | -- | 0.49 | 0.32 | 0.30 | < 0.28 | < 0.28 | 2 | 30 |
| Benzo(B)fluoranthene | < 0.29 | 6.25 | 0.39 | < 0.28 | 2.53 | -- | -- | -- | 0.52 | 0.35 | 0.29 | < 0.28 | < 0.28 | 20 | 300 |
| Benzo(g,h,i)Perylene | 0.45 | 4.44 | 0.37 | < 0.28 | 1.52 | -- | -- | -- | 0.36 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 1000 | 3000 |
| Benzo(K)fluoranthene | < 0.29 | 4.84 | 0.32 | < 0.28 | 0.97 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 1000 | 3000 |
| Bis (2-ethylhexyl) phthalate | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | 0.40 | 100 | 700 |
| Butylbenzylphthalate | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 100 | 1000 |
| Chrysene | 0.31 | 6.28 | 0.48 | < 0.28 | 2.27 | -- | -- | -- | 0.44 | 0.34 | 0.31 | < 0.28 | < 0.28 | 200 | 3000 |
| Di-n-octyl phthalate | < 0.57 | < 0.55 | < 0.56 | < 0.56 | < 0.55 | -- | -- | -- | < 0.56 | < 0.58 | < 0.55 | < 0.56 | < 0.55 | 1000 | 10000 |
| Dibenzo(A,H)anthracene | < 0.29 | 1.28 | < 0.28 | < 0.28 | 0.35 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 2 | 30 |
| Dibenzofuran | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 100 | 1000 |
| Fluoranthene | 0.69 | 10.00 | 0.92 | < 0.28 | 5.39 | -- | -- | -- | 0.87 | 0.60 | 0.50 | 0.42 | < 0.28 | 1000 | 3000 |
| Fluorene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 1000 | 3000 |
| Indeno (1,2,3-cd) pyrene | < 0.29 | 5.31 | 0.34 | < 0.28 | 1.46 | -- | -- | -- | 0.35 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 20 | 300 |
| Naphthalene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 4 | 20 |
| Phenanthrene | 0.37 | 3.82 | 0.58 | < 0.28 | 2.83 | -- | -- | -- | 0.47 | 0.34 | 0.29 | < 0.28 | < 0.28 | 10 | 1000 |
| Pyrene | 0.64 | 9.49 | 1.07 | < 0.28 | 4.59 | -- | -- | -- | 0.74 | 0.54 | 0.51 | 0.40 | < 0.28 | 1000 | 3000 |
| **Total SVOCs** | 3.15 | 67.75 | 5.51 | 0 | 27.32 | -- | -- | -- | 4.70 | 2.82 | 2.48 | 0.82 | 0.40 | | -- |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | | |
| Hydrocarbon, Oil, Petroleum | 31.30 | 36.2 | 39.1 | 14 | 66.4 | -- | -- | -- | 42.5 D | 21.9 | 16.4 | 18.8 | < 11 | 1000 | 3000 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | | |
| 4,4'-DDD | < 0.003 | < 0.003 | < 0.003 | 0.008 | < 0.003 | -- | -- | -- | < 0.003 | < 0.0027 | < 0.0028 | < 0.0028 | < 0.0027 | 10 | 40 |
| BHC-alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | < 0.003 | < 0.0027 | < 0.0028 | < 0.0028 | < 0.0027 | 50 | 500 |
| Dieldrin | < 0.003 | 0.003 | 0.007 | < 0.003 | 0.003 | -- | -- | -- | < 0.003 | < 0.0027 | < 0.0028 | < 0.0028 | < 0.0027 | 0.09 | 0.6 |
| Endosulfan, beta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | < 0.003 | < 0.0027 | < 0.0028 | < 0.0028 | < 0.0027 | 0.5 | 1 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | | |
| Arsenic | 2.52 | 4.04 | 2.93 | 4.2 | 3.2 | -- | -- | -- | 2.36 | 2.84 | 2.75 | 2.74 | 3.84 | 20 | 20 |
| Barium | 10.6 | 63.4 | 21.0 | 37.5 | 21.8 | -- | -- | -- | 17.5 | 20.7 | 11.7 | 24 | 15.4 | 1000 | 3000 |
| Beryllium | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 100 | 200 |
| Cadmium | < 0.41 | 0.52 | < 0.38 | < 0.42 | < 0.4 | -- | -- | -- | < 0.39 | < 0.44 | < 0.42 | < 0.44 | < 0.41 | 80 | 80 |
| Chromium | 7.77 | 24.2 | 8.58 | 7.62 | 5.85 | -- | -- | -- | 10.6 | 10.1 | 8.38 | 4.85 | 13.2 | 100 | 200 |
| Lead | 15.8 | 164 | 72.7 | 105 | 125 | 46.3 | 57.3 | 64.5 | 34 | 39.3 | 20.6 | 96 | 53.3 | 200 | 600 |
| Mercury | 0.06 | 0.12 | 0.15 | 0.44 | 0.20 | -- | -- | -- | 0.08 | 0.13 | 0.08 | < 0.04 | < 0.04 | 20 | 40 |
| Nickel | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 700 | 1000 |
| Silver | < 0.41 | < 0.41 | < 0.38 | < 0.42 | < 0.4 | -- | -- | -- | < 0.39 | < 0.44 | < 0.42 | < 0.44 | < 0.41 | 100 | 200 |
| Vanadium | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 500 | 800 |
| Zinc | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 | 3000 |

Notes:
Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 1
Site 1 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **C-1** | **C-3** | **C-5** | **C-7** | **C0** | **CEC-1-1** | **CEC-1-1** | **CEC-1-2** | **CEC-2-1** | **CEC-2-1** | **CEC-2-2** | **CEC-3-1** | **CEC-3-2** | **MCP Concentrations** | |
| Sample ID | C-1 3-4 | C-3 | C-5 | C-7 | C0 4-5 | CEC-1-1 0-4 | CEC-1-1 8-9.5 | CEC-1-2 0-4 | CEC-2-1 0-4 | CEC-2-1 8.8-10 | CEC-2-2 0-4 | CEC-3-1 0-4 | CEC-3-2 0.3-4 | | |
| Sample Depth (feet) | 3-4 | 0-5 | 0-5 | 0-5 | 4-5 | 0-4 | 8-9.5 | 0-4 | 0-4 | 8.8-10 | 0-4 | 0-4 | 0.3-4 | | |
| Sample Date | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/1/2024 | 11/9/2023 | 11/9/2023 | 12/5/2023 | 11/9/2023 | 11/9/2023 | 12/6/2023 | 11/10/2023 | 12/6/2023 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 24F0155-01 | 24E0124-02 | 24E0124-03 | 24E0124-04 | 24E0050-09 | 23K0414-01 | 23K0414-02 | 23L0197-04 | 23K0414-05 | 23K0414-06 | 23L0197-12 | 23K0414-09 | 23L0197-11 | | |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | | |
| Acetone | -- | < 0.054 | < 0.049 | < 0.065 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 6 | 50 |
| Naphthalene | -- | < 0.005 | < 0.005 | < 0.007 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4 | 20 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | -- | < 0.03 | < 0.026 | < 0.026 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.05 | 6 |
| 2-Methylnaphthalene | -- | < 0.26 | < 0.26 | < 0.264 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.7 | 80 |
| Acenaphthylene | -- | < 0.26 | < 0.26 | < 0.264 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2 | 10 |
| Anthracene | -- | < 0.26 | < 0.26 | < 0.264 | -- | < 0.32 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 1000 | 3000 |
| Benzo(A)anthracene | -- | < 0.26 | < 0.26 | < 0.264 | -- | < 0.32 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 20 | 300 |
| Benzo(A)pyrene | -- | < 0.26 | < 0.26 | < 0.264 | -- | 0.37 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 2 | 30 |
| Benzo(B)fluoranthene | -- | < 0.26 | < 0.26 | < 0.264 | -- | 0.32 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 20 | 300 |
| Benzo(g,h,i)Perylene | -- | < 0.26 | < 0.26 | < 0.264 | -- | < 0.32 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 1000 | 3000 |
| Benzo(K)fluoranthene | -- | < 0.26 | < 0.26 | < 0.264 | -- | < 0.32 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 1000 | 3000 |
| Bis (2-ethylhexyl) phthalate | -- | < 0.26 | < 0.26 | < 0.264 | -- | < 0.32 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 100 | 700 |
| Butylbenzylphthalate | -- | < 0.26 | < 0.26 | < 0.264 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 100 | 1000 |
| Chrysene | -- | < 0.26 | < 0.26 | < 0.264 | -- | 0.34 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 200 | 3000 |
| Di-n-octyl phthalate | -- | < 0.52 | < 0.52 | < 0.528 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 | 10000 |
| Dibenzo(A,H)anthracene | -- | < 0.26 | < 0.26 | < 0.264 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2 | 30 |
| Dibenzofuran | -- | < 0.26 | < 0.26 | < 0.264 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 100 | 1000 |
| Fluoranthene | -- | < 0.26 | < 0.26 | < 0.264 | -- | 0.61 | < 1.33 | < 0.267 | < 0.32 | 0.43 | < 0.26 | < 0.30 | < 0.27 | 1000 | 3000 |
| Fluorene | -- | < 0.26 | < 0.26 | < 0.264 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 | 3000 |
| Indeno (1,2,3-cd) pyrene | -- | < 0.26 | < 0.26 | < 0.264 | -- | < 0.32 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 20 | 300 |
| Naphthalene | -- | < 0.26 | < 0.26 | < 0.264 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4 | 20 |
| Phenanthrene | -- | < 0.26 | < 0.26 | < 0.264 | -- | < 0.32 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 10 | 1000 |
| Pyrene | -- | < 0.26 | < 0.26 | 0.319 | -- | 0.61 | < 1.33 | < 0.267 | < 0.32 | 0.50 | < 0.26 | 0.33 | < 0.27 | 1000 | 3000 |
| **Total SVOCs** | -- | 0 | 0 | 0.319 | -- | 2.25 | 0 | 0 | 0 | 0.92 | 0 | 1.134 | 0 | | -- |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | | |
| Hydrocarbon, Oil, Petroleum | -- | < 10.8 | 19.1 | < 10.8 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 | 3000 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | | |
| 4,4'-DDD | -- | < 0.0027 | < 0.0027 | < 0.0026 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 10 | 40 |
| BHC-alpha | -- | < 0.0027 | < 0.0027 | < 0.0026 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 50 | 500 |
| Dieldrin | -- | < 0.0027 | < 0.0027 | < 0.0026 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.09 | 0.6 |
| Endosulfan, beta | -- | < 0.0027 | < 0.0027 | < 0.0026 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.5 | 1 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | | |
| Arsenic | -- | 4.05 | 2.96 | 1.71 | -- | 4.51 | < 4.57 | < 2 | 2.59 | 3.26 | < 2.02 | < 1.9 | < 2.01 | 20 | 20 |
| Barium | -- | 14.1 | 15 | 9.04 | -- | 74.7 | 22.8 | 12 | 44.3 | 44.2 | 18.1 | 23.1 | 9.51 | 1000 | 3000 |
| Beryllium | -- | -- | -- | -- | -- | 0.25 | 0.28 | 0.21 | 0.24 | 0.42 | 0.22 | 0.17 | 0.29 | 100 | 200 |
| Cadmium | -- | < 0.36 | < 0.39 | < 0.4 | -- | < 0.46 | < 0.91 | < 0.4 | < 0.46 | 0.84 | < 0.4 | < 0.38 | < 0.4 | 80 | 80 |
| Chromium | -- | 6.84 | 5.88 | 4.11 | -- | 8.63 | 13.2 | 6.44 | 21.2 | 17.8 | 7.15 | 12.9 | 6.65 | 100 | 200 |
| Lead | 54.6 | 24.6 | 169 | 10.9 | 4210 D | 307 | 13.8 | 11.5 | 310 | 136 | 32 | 28.6 | 8.6 | 200 | 600 |
| Mercury | -- | < 0.04 | 0.035 | < 0.035 | -- | 1.9 D | < 0.16 | < 0.04 | < 0.04 | 1.17 D | 0.05 | 0.07 | 0.05 | 20 | 40 |
| Nickel | -- | -- | -- | -- | -- | 5.44 | 11 | 5.56 | 6.15 | 8.28 | 5.44 | 5.82 | 4.59 | 700 | 1000 |
| Silver | -- | < 0.36 | < 0.39 | < 0.4 | -- | < 0.46 | < 0.91 | < 0.4 | < 0.46 | < 0.62 | < 0.4 | < 0.38 | < 0.4 | 100 | 200 |
| Vanadium | -- | -- | -- | -- | -- | 10.6 | 28.1 | 9.65 | 14.4 | 17.9 | 9.97 | 9.31 | 7.4 | 500 | 800 |
| Zinc | -- | -- | -- | -- | -- | 101 | 17.2 | 23.1 | 76 | 68.6 | 26.2 | 41 | 18 | 1000 | 3000 |

Notes:
Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 1
Site 1 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **CEC-4-1** | **CEC-4-1** | **CEC-4-2** | **CEC-5-1** | **CEC-5-1** | **CEC-5-2** | **CEC-6-2** | **CEC-7-2** | **CEC-8-2** | **D-4** | **D-8.5** | **DD-1** | **DD-3** | **MCP Concentrations** | |
| Sample ID | CEC-4-1 0-4 | CEC-4-1 8-10 | CEC-4-2 0-4 | CEC-5-1 0-4 | CEC-5-1 8-10 | CEC-5-2 0-4 | CEC-6-2 0-4 | CEC-7-2 0-4 | CEC-8-2 2-4 | D-4 4-5 | D-8.5 | DD-1 | DD-3 | | |
| Sample Depth (feet) | 0-4 | 8-10 | 0-4 | 0-4 | 8-10 | 0-4 | 0-4 | 0-4 | 2-4 | 4-5 | 0-5 | 0-5 | 0-5 | | |
| Sample Date | 11/9/2023 | 11/9/2023 | 12/5/2023 | 11/10/2023 | 11/10/2023 | 12/6/2023 | 12/6/2023 | 12/5/2023 | 12/5/2023 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/30/2024 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 23K0414-03 | 23K0414-04 | 23L0197-05 | 23K0414-08 | 23K0414-07 | 23L0197-09 | 23L0197-10 | 23L0197-07 | 23L0197-02 | 24E0125-09 | 24E0124-05 | 24D1044-18 | 24E0026-03 | | |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | | |
| Acetone | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.063 | < 0.047 | < 0.045 | 6 | 50 |
| Naphthalene | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.006 | < 0.005 | < 0.005 | 4 | 20 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.03 | 0.03 | < 0.03 | 0.05 | 6 |
| 2-Methylnaphthalene | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.27 | < 0.29 | < 0.27 | 0.7 | 80 |
| Acenaphthylene | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.27 | < 0.29 | < 0.27 | 2 | 10 |
| Anthracene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 0.34 | < 0.28 | < 0.28 | < 0.28 | -- | < 0.27 | 0.53 | < 0.27 | 1000 | 3000 |
| Benzo(A)anthracene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 0.69 | < 0.28 | < 0.28 | 0.51 | -- | < 0.27 | 0.76 | < 0.27 | 20 | 300 |
| Benzo(A)pyrene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 0.60 | < 0.28 | < 0.28 | 0.49 | -- | < 0.27 | 0.69 | < 0.27 | 2 | 30 |
| Benzo(B)fluoranthene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 0.55 | < 0.28 | < 0.28 | 0.42 | -- | < 0.27 | 0.72 | < 0.27 | 20 | 300 |
| Benzo(g,h,i)Perylene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 0.34 | < 0.28 | < 0.28 | 0.34 | -- | < 0.27 | 0.41 | < 0.27 | 1000 | 3000 |
| Benzo(K)fluoranthene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 0.44 | < 0.28 | < 0.28 | 0.37 | -- | < 0.27 | 0.29 | < 0.27 | 1000 | 3000 |
| Bis (2-ethylhexyl) phthalate | < 0.27 | 0.35 | < 0.28 | < 0.26 | < 0.33 | < 0.27 | < 0.28 | < 0.28 | < 0.28 | -- | < 0.27 | < 0.29 | < 0.27 | 100 | 700 |
| Butylbenzylphthalate | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.27 | < 0.29 | < 0.27 | 100 | 1000 |
| Chrysene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 0.63 | < 0.28 | < 0.28 | 0.45 | -- | < 0.27 | 0.72 | < 0.27 | 200 | 3000 |
| Di-n-octyl phthalate | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.54 | < 0.58 | < 0.54 | 1000 | 10000 |
| Dibenzo(A,H)anthracene | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.27 | < 0.29 | < 0.27 | 2 | 30 |
| Dibenzofuran | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.27 | < 0.29 | < 0.27 | 100 | 1000 |
| Fluoranthene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 1.38 | < 0.28 | < 0.28 | 1.01 | -- | < 0.27 | 1.85 | < 0.27 | 1000 | 3000 |
| Fluorene | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.27 | < 0.29 | < 0.27 | 1000 | 3000 |
| Indeno (1,2,3-cd) pyrene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 0.37 | < 0.28 | < 0.28 | 0.33 | -- | < 0.27 | 0.40 | < 0.27 | 20 | 300 |
| Naphthalene | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.27 | < 0.29 | < 0.27 | 4 | 20 |
| Phenanthrene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 1.27 | < 0.28 | < 0.28 | 0.52 | -- | < 0.27 | 1.97 | < 0.27 | 10 | 1000 |
| Pyrene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 1.26 | < 0.28 | < 0.28 | 0.89 | -- | < 0.27 | 1.51 | 0.27 | 1000 | 3000 |
| **Total SVOCs** | 0 | 0.35 | 0 | 0 | 0 | 7.86 | 0 | 0 | 5.34 | -- | 0 | 9.88 | 0.27 | | -- |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | | |
| Hydrocarbon, Oil, Petroleum | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 11.6 | 19.8 | 146 D | 1000 | 3000 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | | |
| 4,4'-DDD | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.0027 | < 0.0029 | < 0.0026 | 10 | 40 |
| BHC-alpha | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.0027 | < 0.0029 | < 0.0026 | 50 | 500 |
| Dieldrin | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.0027 | < 0.0029 | < 0.0026 | 0.09 | 0.6 |
| Endosulfan, beta | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.0027 | < 0.0029 | < 0.0026 | 0.5 | 1 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | | |
| Arsenic | < 2.02 | < 1.08 | < 2.08 | < 1.9 | 2.58 | < 1.91 | < 1.92 | < 2.13 | < 1.88 | -- | 1.77 | 7.09 | 2.35 | 20 | 20 |
| Barium | 11.9 | 5.87 | 8.36 | 17.7 | 60.4 | 19 | 15.9 | 9.95 | 20.5 | -- | 22.1 | 37.8 | 15.2 | 1000 | 3000 |
| Beryllium | 0.16 | 0.31 | 0.17 | 0.15 | 0.24 | 0.18 | 0.16 | 0.16 | 0.23 | -- | -- | -- | -- | 100 | 200 |
| Cadmium | < 0.4 | < 0.22 | < 0.42 | < 0.38 | < 0.49 | < 0.38 | < 0.38 | < 0.43 | < 0.38 | -- | < 0.43 | < 0.39 | < 0.37 | 80 | 80 |
| Chromium | 4.55 | 6.97 | 4.05 | 7.65 | 7.81 | 7.68 | 8.49 | 6.12 | 11.5 | -- | 4.17 | 23.3 | 10.8 | 100 | 200 |
| Lead | 16.3 | 4.16 | 7.64 | 5.94 | 15.4 | 52.6 | 30.9 | 15.2 | 49.7 | 411 | 73.8 | 76.2 | 19.5 | 200 | 600 |
| Mercury | < 0.03 | < 0.04 | < 0.03 | < 0.03 | 0.07 | < 0.03 | 0.11 | 0.03 | 0.09 | -- | 0.09 | 0.08 | 0.06 | 20 | 40 |
| Nickel | 4.11 | 3.62 | 3.7 | 5.66 | 4.18 | 4.81 | 5.04 | 4.02 | 7.02 | -- | -- | -- | -- | 700 | 1000 |
| Silver | < 0.4 | 0.43 | < 0.42 | < 0.38 | < 0.49 | < 0.38 | < 0.38 | < 0.43 | < 0.38 | -- | < 0.43 | < 0.39 | < 0.37 | 100 | 200 |
| Vanadium | 6.01 | 13.9 | 7.7 | 6.02 | 14.4 | 9.95 | 9.47 | 9.18 | 13 | -- | -- | -- | -- | 500 | 800 |
| Zinc | 73.1 | 55.2 | 14.9 | 15.2 | 18.9 | 36.9 | 24.4 | 21.9 | 47.3 | -- | -- | -- | -- | 1000 | 3000 |

Notes:
Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 1
Site 1 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **DD-5** | **DD-7** | **E-1** | **E-1** | **E-1** | **E-1** | **E-1** | **E-2** | **E-3** | **E-3** | **E-5** | **E-7** | **E0** | **MCP Concentrations** | |
| Sample ID | DD-5 | DD-7 | E-1 | E-1 1-2 | E-1 2-3 | E-1 4-5 | E-1 9-10 | E-2 4-5 | E-3 0-3 | E-3 3-7 | E-5 | E-7 | **E-0 9-10** | | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-5 | 1-2 | 2-3 | 4-5 | 9-10 | 4-5 | 0-3 | 3-7 | 0-5 | 0-5 | 9-10 | | |
| Sample Date | 4/30/2024 | 4/30/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 6/21/2024 | 5/3/2024 | 5/3/2024 | 5/3/2024 | 5/2/2024 | 5/2/2024 | 6/21/2024 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 24E0026-02 | 24E0026-01 | 24E0124-08 | 24E0125-10 | 24E1060-01 | 24E0125-15 | 24F0929-08 | 24E0126-02 | 24E0124-16 | 24E0124-17 | 24E0124-07 | 24E0124-06 | 24F0927-01 | | |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | | |
| Acetone | < 0.051 | < 1.52 | < 0.053 | -- | -- | -- | -- | -- | < 0.066 | < 0.058 | < 0.060 | < 0.068 | -- | 6 | 50 |
| Naphthalene | < 0.005 | 0.857 | < 0.005 | -- | -- | -- | -- | -- | < 0.007 | < 0.006 | < 0.006 | < 0.007 | -- | 4 | 20 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | 0.08 | < 0.03 | -- | -- | -- | -- | -- | < 0.03 | < 0.03 | < 0.03 | < 0.03 | -- | 0.05 | 6 |
| 2-Methylnaphthalene | < 0.28 | 0.31 | < 0.29 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | < 0.28 | < 0.30 | -- | 0.7 | 80 |
| Acenaphthylene | < 0.28 | 0.75 | < 0.29 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | < 0.28 | < 0.30 | -- | 2 | 10 |
| Anthracene | < 0.28 | 0.60 | < 0.29 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | 0.44 | < 0.30 | -- | 1000 | 3000 |
| Benzo(A)anthracene | < 0.28 | 1.02 | 1.00 | -- | -- | -- | -- | -- | 0.29 | 0.33 | 1.29 | < 0.30 | -- | 20 | 300 |
| Benzo(A)pyrene | < 0.28 | 0.93 | 1.17 | -- | -- | -- | -- | -- | 0.32 | 0.36 | 1.21 | < 0.30 | -- | 2 | 30 |
| Benzo(B)fluoranthene | < 0.28 | 1.04 | 0.93 | -- | -- | -- | -- | -- | 0.36 | 0.37 | 0.92 | < 0.30 | -- | 20 | 300 |
| Benzo(g,h,i)Perylene | < 0.28 | 0.51 | 0.84 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | 0.75 | < 0.30 | -- | 1000 | 3000 |
| Benzo(K)fluoranthene | < 0.28 | 0.41 | 0.85 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | 0.90 | < 0.30 | -- | 1000 | 3000 |
| Bis (2-ethylhexyl) phthalate | < 0.28 | < 0.27 | < 0.29 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | < 0.28 | < 0.30 | -- | 100 | 700 |
| Butylbenzylphthalate | < 0.28 | < 0.27 | 0.39 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | < 0.28 | < 0.30 | -- | 100 | 1000 |
| Chrysene | < 0.28 | 1.02 | 0.93 | -- | -- | -- | -- | -- | 0.32 | 0.32 | 1.20 | < 0.30 | -- | 200 | 3000 |
| Di-n-octyl phthalate | < 0.56 | < 0.54 | < 0.57 | -- | -- | -- | -- | -- | < 0.53 | < 0.50 | < 0.57 | < 0.60 | -- | 1000 | 10000 |
| Dibenzo(A,H)anthracene | < 0.28 | < 0.27 | < 0.29 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | < 0.28 | < 0.30 | -- | 2 | 30 |
| Dibenzofuran | < 0.28 | 0.43 | < 0.29 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | < 0.28 | < 0.30 | -- | 100 | 1000 |
| Fluoranthene | < 0.28 | 3.07 | 1.48 | -- | -- | -- | -- | -- | 0.53 | 0.51 | 2.28 | < 0.30 | -- | 1000 | 3000 |
| Fluorene | < 0.28 | 0.59 | < 0.29 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | < 0.28 | < 0.30 | -- | 1000 | 3000 |
| Indeno (1,2,3-cd) pyrene | < 0.28 | 0.55 | 0.92 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | 0.80 | < 0.30 | -- | 20 | 300 |
| Naphthalene | < 0.28 | 0.79 | < 0.29 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | < 0.28 | < 0.30 | -- | 4 | 20 |
| Phenanthrene | < 0.28 | 3.23 | 0.56 | -- | -- | -- | -- | -- | 0.27 | < 0.25 | 1.78 | < 0.30 | -- | 10 | 1000 |
| Pyrene | < 0.28 | 2.20 | 1.48 | -- | -- | -- | -- | -- | 0.52 | 0.60 | 2.54 | < 0.30 | -- | 1000 | 3000 |
| **Total SVOCs** | -- | 17.53 | 10.55 | -- | -- | -- | -- | -- | 2.59 | 2.47 | 14.1 | 0 | -- | | -- |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | | |
| Hydrocarbon, Oil, Petroleum | < 10.5 | 53.2 | 72.3 D | -- | -- | -- | -- | -- | 36.8 | 20.6 | 70.3 | 19.6 | -- | 1000 | 3000 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | | |
| 4,4'-DDD | < 0.0027 | < 0.0027 | < 0.0027 | -- | -- | -- | -- | -- | < 0.0027 | < 0.0026 | < 0.0028 | < 0.0029 | -- | 10 | 40 |
| BHC-alpha | < 0.0027 | < 0.0027 | < 0.0027 | -- | -- | -- | -- | -- | < 0.0027 | < 0.0026 | < 0.0028 | < 0.0029 | -- | 50 | 500 |
| Dieldrin | < 0.0027 | < 0.0027 | < 0.0027 | -- | -- | -- | -- | -- | < 0.0027 | < 0.0026 | < 0.0028 | < 0.0029 | -- | 0.09 | 0.6 |
| Endosulfan, beta | < 0.0027 | < 0.0027 | < 0.0027 | -- | -- | -- | -- | -- | < 0.0027 | < 0.0026 | < 0.0028 | < 0.0029 | -- | 0.5 | 1 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | | |
| Arsenic | 1.31 | 2.86 | 6.72 | -- | -- | -- | -- | -- | 5.39 | 2.99 | 8.09 | 6.38 | -- | 20 | 20 |
| Barium | 5.93 | 8.73 | 216 | -- | -- | -- | -- | -- | 31.9 | 14.9 | 104 | 58 | -- | 1000 | 3000 |
| Beryllium | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 100 | 200 |
| Cadmium | < 0.4 | < 0.39 | < 0.39 | -- | -- | -- | -- | -- | < 0.36 | < 0.39 | < 0.38 | < 0.44 | -- | 80 | 80 |
| Chromium | 4.29 | 4.36 | 26.7 | -- | -- | -- | -- | -- | 11.1 | 5.89 | 12.5 | 11.8 | -- | 100 | 200 |
| Lead | 9.18 | 5.02 | 676 | 340 | 183 | 1890 | 413 | 1230 | 188 | 53.5 | 368 | 171 | 235 | 200 | 600 |
| Mercury | 0.04 | < 0.03 | 0.24 | -- | -- | -- | -- | -- | 0.15 | 0.36 | 0.99 D | 0.33 | -- | 20 | 40 |
| Nickel | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 700 | 1000 |
| Silver | < 0.4 | < 0.39 | 0.53 | -- | -- | -- | -- | -- | < 0.36 | < 0.39 | < 0.38 | < 0.44 | -- | 100 | 200 |
| Vanadium | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 500 | 800 |
| Zinc | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 | 3000 |

Notes:
Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 1
Site 1 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **EE-8.5** | **EE-0.5** | **FF-1** | **FF-3** | **FF-5** | **FF-7** | **G-1** | **G-1** | **G-1** | **G-2** | **G-3** | **G-3** | **G-5** | **MCP Concentrations** | |
| Sample ID | EE-8.5 | EE-0.5 | FF-1 | **FF-3** | **FF-5** | **FF-7** | G-1 | G-1 4-5 | G-1 9-10 | G-2 4-5 | G-3 0-4 | G-3 4-8 | G-5 | | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 4-5 | 9-10 | 4-5 | 0-4 | 4-8 | 0-5 | | |
| Sample Date | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | 5/2/2024 | 6/21/2024 | 5/3/2024 | 5/1/2024 | 5/1/2024 | 5/2/2024 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 24D1044-13 | 24D1044-14 | 24D1044-12 | 24D1044-11 | 24D1044-10 | 24D1044-09 | 24E0124-11 | 24E0125-16 | 24F0929-07 | 24E0126-07 | 24E0050-06 | 24E0050-07 | 24E0124-10 | | |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | | |
| Acetone | < 0.048 | < 0.068 | < 0.045 | < 0.045 | < 0.046 | < 0.047 | < 0.055 | -- | -- | -- | < 0.049 | < 0.051 | < 0.050 | 6 | 50 |
| Naphthalene | < 0.005 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | < 0.005 | < 0.005 | < 0.005 | 4 | 20 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | -- | -- | -- | < 0.03 | 0.03 | < 0.03 | 0.05 | 6 |
| 2-Methylnaphthalene | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | < 0.28 | < 0.27 | 0.7 | 80 |
| Acenaphthylene | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | < 0.28 | < 0.27 | 2 | 10 |
| Anthracene | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | 0.40 | < 0.27 | 1000 | 3000 |
| Benzo(A)anthracene | < 0.29 | < 0.29 | 0.42 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | 0.78 | < 0.27 | 20 | 300 |
| Benzo(A)pyrene | < 0.29 | < 0.29 | 0.42 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | 0.80 | < 0.27 | 2 | 30 |
| Benzo(B)fluoranthene | < 0.29 | < 0.29 | 0.44 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | 0.55 | < 0.27 | 20 | 300 |
| Benzo(g,h,i)Perylene | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | 0.52 | < 0.27 | 1000 | 3000 |
| Benzo(K)fluoranthene | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | 0.47 | < 0.27 | 1000 | 3000 |
| Bis (2-ethylhexyl) phthalate | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | < 0.28 | < 0.27 | 100 | 700 |
| Butylbenzylphthalate | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | < 0.28 | < 0.27 | 100 | 1000 |
| Chrysene | < 0.29 | < 0.29 | 0.41 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | 0.77 | < 0.27 | 200 | 3000 |
| Di-n-octyl phthalate | < 0.57 | < 0.58 | < 0.54 | < 0.54 | < 0.54 | < 0.57 | < 0.56 | -- | -- | -- | < 0.55 | < 0.56 | < 0.54 | 1000 | 10000 |
| Dibenzo(A,H)anthracene | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | < 0.28 | < 0.27 | 2 | 30 |
| Dibenzofuran | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | < 0.28 | < 0.27 | 100 | 1000 |
| Fluoranthene | < 0.29 | < 0.29 | 0.88 | < 0.27 | < 0.27 | < 0.29 | 0.31 | -- | -- | -- | 0.58 | 1.39 | 0.35 | 1000 | 3000 |
| Fluorene | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | < 0.28 | < 0.27 | 1000 | 3000 |
| Indeno (1,2,3-cd) pyrene | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | 0.48 | < 0.27 | 20 | 300 |
| Naphthalene | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | < 0.28 | < 0.27 | 4 | 20 |
| Phenanthrene | < 0.29 | < 0.29 | 0.45 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | 0.56 | 1.51 | < 0.27 | 10 | 1000 |
| Pyrene | < 0.29 | < 0.29 | 0.76 | < 0.27 | < 0.27 | < 0.29 | 0.29 | -- | -- | -- | 0.56 | 1.67 | 0.44 | 1000 | 3000 |
| **Total SVOCs** | 0 | 0 | 3.77 | 0 | 0 | 0 | 0.60 | -- | -- | -- | 1.70 | 9.38 | 0.78 | | -- |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | | |
| Hydrocarbon, Oil, Petroleum | < 11.1 | 72.8 D | 42 | < 11.4 | < 10.5 | 16.2 | 27.5 | -- | -- | -- | 19.6 | 44.7 | 20.7 | 1000 | 3000 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | | |
| 4,4'-DDD | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | < 0.003 | < 0.003 | < 0.003 | 10 | 40 |
| BHC-alpha | < 0.003 | < 0.003 | 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | < 0.003 | < 0.003 | < 0.003 | 50 | 500 |
| Dieldrin | < 0.003 | < 0.003 | 0.025 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.6 |
| Endosulfan, beta | < 0.003 | < 0.003 | 0.006 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | < 0.003 | < 0.003 | < 0.003 | 0.5 | 1 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | | |
| Arsenic | 6.02 | 4.39 | 1.47 | 4.08 | 3.12 | 4.41 | 4.4 | -- | -- | -- | 4.93 | 4.95 | 3.38 | 20 | 20 |
| Barium | 66.6 | 28.6 | 16.6 | 16.4 | 16.4 | 20.7 | 50 | -- | -- | -- | 21.5 | 24.9 | 18.1 | 1000 | 3000 |
| Beryllium | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 100 | 200 |
| Cadmium | < 0.37 | < 0.41 | < 0.38 | < 0.42 | < 0.4 | < 0.43 | < 0.42 | -- | -- | -- | < 0.37 | < 0.42 | < 0.36 | 80 | 80 |
| Chromium | 12 | 10.7 | 5.23 | 9.93 | 7.16 | 9.44 | 12.3 | -- | -- | -- | 10.2 | 13 | 6.3 | 100 | 200 |
| Lead | 134 | 37.6 | 22.1 | 13.9 | 6.21 | 61.3 | 441 | 5420 D | 31.6 | 863 | 24.2 | 59.7 | 51.1 | 200 | 600 |
| Mercury | 0.14 | < 0.03 | 0.13 | < 0.036 | < 0.033 | 0.048 | 0.138 | -- | -- | -- | < 0.03 | 0.05 | 0.18 | 20 | 40 |
| Nickel | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 700 | 1000 |
| Silver | < 0.37 | < 0.41 | < 0.38 | < 0.42 | < 0.4 | < 0.43 | < 0.42 | -- | -- | -- | < 0.37 | < 0.42 | < 0.36 | 100 | 200 |
| Vanadium | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 500 | 800 |
| Zinc | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 | 3000 |

Notes:
Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 1
Site 1 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **G-5** | **G-5** | **G-7** | **H-1** | **H-8.5** | **HH-1** | **HH-3** | **HH-5** | **HH-7** | **I-1** | **I-3** | **I-3** | **I-5** | **MCP Concentrations** | |
| Sample ID | G-5 5-6 | G-5 9-10 | G-7 | H-1 4-5 | H-8.5 | HH-1 | HH-3 | HH-5 | HH-7 | I-1 | I-3 | I-3 4-8 | I-5 | | |
| Sample Depth (feet) | 5-6 | 9-10 | 0-5 | 4-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-4 | 4-8 | 0-5 | | |
| Sample Date | 6/21/2024 | 6/21/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/30/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | 5/1/2024 | 6/21/2024 | 5/2/2024 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 24F0928-19 | 24F0929-11 | 24E0124-09 | 24E0125-17 | 24E0124-12 | 24D1044-08 | 24E0026-04 | 24D1044-06 | 24D1044-05 | 24E0124-15 | 24E0050-04 | 24F0927-02 | 24E0124-14 | | |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | | |
| Acetone | -- | -- | < 0.055 | -- | < 0.054 | < 0.044 | < 0.046 | < 0.043 | < 0.063 | < 0.047 | < 0.046 | < 0.049 | < 0.048 | 6 | 50 |
| Naphthalene | -- | -- | < 0.006 | -- | < 0.005 | < 0.004 | 0.013 | < 0.004 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 4 | 20 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | -- | -- | < 0.03 | -- | < 0.03 | < 0.03 | 0.04 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 0.04 | 0.05 | 6 |
| 2-Methylnaphthalene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | < 0.27 | 0.7 | 80 |
| Acenaphthylene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | 1.05 | 2 | 10 |
| Anthracene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | 0.47 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | 0.82 | 1000 | 3000 |
| Benzo(A)anthracene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | 0.48 | < 0.28 | < 0.29 | 0.38 | < 0.27 | < 0.28 | 3.22 | 20 | 300 |
| Benzo(A)pyrene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | 0.40 | < 0.28 | < 0.29 | 0.40 | < 0.27 | < 0.28 | 2.23 | 2 | 30 |
| Benzo(B)fluoranthene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | 0.41 | < 0.28 | < 0.29 | 0.46 | < 0.27 | < 0.28 | 2.20 | 20 | 300 |
| Benzo(g,h,i)Perylene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | 1.19 | 1000 | 3000 |
| Benzo(K)fluoranthene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | 0.71 | 1000 | 3000 |
| Bis (2-ethylhexyl) phthalate | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | 0.53 | < 0.28 | < 0.27 | < 0.28 | < 0.27 | 100 | 700 |
| Butylbenzylphthalate | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | 1.32 | < 0.28 | < 0.27 | < 0.28 | < 0.27 | 100 | 1000 |
| Chrysene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | 0.42 | < 0.28 | < 0.29 | 0.43 | < 0.27 | < 0.28 | 4.09 | 200 | 3000 |
| Di-n-octyl phthalate | -- | -- | < 0.55 | -- | < 0.51 | < 0.56 | < 0.55 | < 0.55 | 1.03 | < 0.56 | < 0.54 | < 0.55 | < 0.54 | 1000 | 10000 |
| Dibenzo(A,H)anthracene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | 0.38 | 2 | 30 |
| Dibenzofuran | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | < 0.27 | 100 | 1000 |
| Fluoranthene | -- | -- | 0.28 | -- | < 0.26 | 0.39 | 1.28 | < 0.28 | < 0.29 | 0.73 | 0.41 | 0.33 | 3.58 | 1000 | 3000 |
| Fluorene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | < 0.27 | 1000 | 3000 |
| Indeno (1,2,3-cd) pyrene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | 1.00 | 20 | 300 |
| Naphthalene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | 0.35 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | < 0.27 | 4 | 20 |
| Phenanthrene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | 1.56 | < 0.28 | < 0.29 | 0.38 | < 0.27 | < 0.28 | 2.48 | 10 | 1000 |
| Pyrene | -- | -- | 0.37 | -- | < 0.26 | 0.33 | 0.97 | < 0.28 | < 0.29 | 0.69 | 0.44 | 0.41 | 5.88 | 1000 | 3000 |
| **Total SVOCs** | -- | -- | 0.64 | -- | 0 | 0.71 | 6.37 | 0 | 2.80 | 3.48 | 0.86 | 0.74 | 28.87 | | -- |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | | |
| Hydrocarbon, Oil, Petroleum | -- | -- | 63.4 | -- | 17.9 | 298 | < 11.2 | < 10.6 | 15.5 | 28.1 | 73.8 | 73.2 | 16 | 1000 | 3000 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | | |
| 4,4'-DDD | -- | -- | < 0.003 | -- | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 10 | 40 |
| BHC-alpha | -- | -- | < 0.003 | -- | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 50 | 500 |
| Dieldrin | -- | -- | < 0.003 | -- | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.6 |
| Endosulfan, beta | -- | -- | < 0.003 | -- | < 0.003 | 0.004 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.5 | 1 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | | |
| Arsenic | -- | -- | < 0.86 | -- | 2.79 | 4.83 | 2.67 | 1.8 | 3.24 | 6.3 | 2.58 | < 0.99 | 3.94 | 20 | 20 |
| Barium | -- | -- | < 0.86 | -- | 21.6 | 21.9 | 12.9 | 8.93 | 19.4 | 44.7 | 35.2 | 13 | 14.2 | 1000 | 3000 |
| Beryllium | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 100 | 200 |
| Cadmium | -- | -- | < 0.43 | -- | < 0.4 | < 0.38 | < 0.4 | < 0.41 | < 0.42 | < 0.41 | < 0.36 | < 0.49 | < 0.39 | 80 | 80 |
| Chromium | -- | -- | < 0.86 | -- | 10.1 | 7.16 | 4.97 | 3.9 | 5.41 | 15.4 | 7.1 | 5.09 | 9.6 | 100 | 200 |
| Lead | 46.5 | 101 | < 4.3 | 89.4 D | 17.6 | 86.2 | 18.8 | < 4.12 | 53.6 | 107 | 34 | 35.2 | 19.4 | 200 | 600 |
| Mercury | -- | -- | 0.13 | -- | 0.07 | 0.05 | < 0.03 | < 0.03 | 0.13 | 0.26 | 0.08 | < 0.03 | 0.13 | 20 | 40 |
| Nickel | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 700 | 1000 |
| Silver | -- | -- | < 0.43 | -- | < 0.4 | < 0.38 | < 0.4 | < 0.41 | < 0.42 | < 0.41 | < 0.36 | -- | < 0.39 | 100 | 200 |
| Vanadium | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 500 | 800 |
| Zinc | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 | 3000 |

Notes:
Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 1
Site 1 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Location | **I-7** | **II-8.5** | **II-8.5** | **II0.5** | **JJ/II-2** | **JJ/II-6** | **MCP Concentrations** | |
| Sample ID | I-7 | **II-8.5** | II-8.5 5-6 | **II-0.5** | **JJ/II-2** | **JJ/II-6** | | |
| Sample Depth (feet) | 0-5 | 0-5 | 5-6 | 0-5 | 0-5 | 0-5 | RCS-1 | RCS-2 |
| Sample Date | 5/2/2024 | 4/29/2024 | 5/3/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | | |
| Laboratory Sample ID | 24E0124-13 | 24D1044-03 | 24E0124-18 | 24D1044-04 | 24D1044-02 | 24D1044-01 | | |
| **VOCs (mg/kg)** | | | | | | | | |
| Acetone | 0.091 | 0.071 | 0.246 | < 0.047 | < 0.047 | < 0.048 | 6 | 50 |
| Naphthalene | < 0.006 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | < 0.005 | 4 | 20 |
| **SVOCs (mg/kg)** | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | < 0.10 | < 0.03 | < 0.027 | < 0.028 | 0.05 | 6 |
| 2-Methylnaphthalene | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 0.7 | 80 |
| Acenaphthylene | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 2 | 10 |
| Anthracene | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 1000 | 3000 |
| Benzo(A)anthracene | < 0.27 | < 0.31 | < 0.99 | 0.65 | < 0.271 | < 0.28 | 20 | 300 |
| Benzo(A)pyrene | < 0.27 | < 0.31 | < 0.99 | 0.62 | < 0.271 | < 0.28 | 2 | 30 |
| Benzo(B)fluoranthene | < 0.27 | < 0.31 | < 0.99 | 0.67 | < 0.271 | < 0.28 | 20 | 300 |
| Benzo(g,h,i)Perylene | < 0.27 | < 0.31 | < 0.99 | 0.38 | < 0.271 | < 0.28 | 1000 | 3000 |
| Benzo(K)fluoranthene | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 1000 | 3000 |
| Bis (2-ethylhexyl) phthalate | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 100 | 700 |
| Butylbenzylphthalate | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 100 | 1000 |
| Chrysene | < 0.27 | < 0.31 | < 0.99 | 0.66 | < 0.271 | < 0.28 | 200 | 3000 |
| Di-n-octyl phthalate | < 0.55 | < 0.61 | < 1.98 | < 0.53 | < 0.542 | < 0.561 | 1000 | 10000 |
| Dibenzo(A,H)anthracene | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 2 | 30 |
| Dibenzofuran | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 100 | 1000 |
| Fluoranthene | < 0.27 | 0.42 | 0.99 | 1.44 | < 0.271 | < 0.28 | 1000 | 3000 |
| Fluorene | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 1000 | 3000 |
| Indeno (1,2,3-cd) pyrene | < 0.27 | < 0.31 | < 0.99 | 0.37 | < 0.271 | < 0.28 | 20 | 300 |
| Naphthalene | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 4 | 20 |
| Phenanthrene | < 0.27 | < 0.31 | < 0.99 | 0.98 | < 0.271 | < 0.28 | 10 | 1000 |
| Pyrene | < 0.27 | 0.40 | 0.99 | 1.24 | < 0.271 | < 0.28 | 1000 | 3000 |
| **Total SVOCs** | 0 | 0.82 | 1.98 | 6.63 | 0 | 0 | | -- |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | |
| Hydrocarbon, Oil, Petroleum | < 11.9 | 36.2 | 273 | 32 | < 10.6 | < 11 | 1000 | 3000 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | |
| 4,4'-DDD | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | < 0.003 | 10 | 40 |
| BHC-alpha | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | < 0.003 | 50 | 500 |
| Dieldrin | < 0.003 | < 0.003 | < 0.005 | 0.037 | < 0.003 | < 0.003 | 0.09 | 0.6 |
| Endosulfan, beta | < 0.003 | < 0.003 | < 0.005 | 0.009 | < 0.003 | < 0.003 | 0.5 | 1 |
| **Total Metals (mg/kg)** | | | | | | | | |
| Arsenic | 5.81 | 6.55 | 6.92 | 1.83 | 2.62 | 3.29 | 20 | 20 |
| Barium | 24.1 | 86.3 | 55.4 | 18.4 | 11.3 | 13 | 1000 | 3000 |
| Beryllium | -- | -- | -- | -- | -- | -- | 100 | 200 |
| Cadmium | < 0.46 | < 0.45 | < 0.7 | < 0.37 | < 0.39 | < 0.38 | 80 | 80 |
| Chromium | 19.8 | 12.1 | 9.25 | 3.76 | 5.07 | 6.43 | 100 | 200 |
| Lead | 27.3 | 347 | 21.4 | 39.4 | 6.81 | 12.8 | 200 | 600 |
| Mercury | 0.09 | 0.58 | < 0.06 | 0.07 | < 0.035 | < 0.031 | 20 | 40 |
| Nickel | -- | -- | -- | -- | -- | -- | 700 | 1000 |
| Silver | < 0.46 | < 0.45 | < 0.7 | < 0.37 | < 0.39 | < 0.38 | 100 | 200 |
| Vanadium | -- | -- | -- | -- | -- | -- | 500 | 800 |
| Zinc | -- | -- | -- | -- | -- | -- | 1000 | 3000 |

Notes:

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.

SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls

D = identified in an analysis that has been diluted

< = not detected above laboratory reporting limit

-- = Not Tested

NS = No Standard

Exceeds MassDEP MCP RCS-1

Exceeds MassDEP MCP RCS-1 and RCS-2

Table 2
Site 1 - Soil PCBs
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **A-1** | **A-1** | **A-1** | **A-1** | **A-2** | **A-2** | **A-2** | **A-2** | **A-3** | **A-3** | **A-3** | **A-3** | | |
| Sample ID | A-1 | A-1 0-1 | A-1 1-2 | A-1 3-4 | A-2 0-1 | A-2 1-2 | A-2 2-3 | A-2 3-4 | A-3 | A-3 1-2 | A-3 2-3 | A-3 4-5 | | |
| Sample Depth (feet) | 0-5 | 0-1 | 1-2 | 4-5 | 0-1 | 1-2 | 2-3 | 3-4 | 0-5 | 1-2 | 2-3 | 4-5 | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 6/20/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 24E0050-03 | 24G0454-03 | 24E0051-02 | 24E0051-11 | 23L0931-01 | 23L0931-02 | 23L0931-03 | 24F0928-16 | 24E0050-02 | 24E0051-03 | 24E0814-07 | 24E0051-12 | | |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | 0.3 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1254 | 0.1 | 0.3 | < 0.05 | 0.2 | < 0.06 | < 0.06 | 0.6 | 0.2 | 0.3 | 0.4 | 1.1 | 0.2 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| Total PCBs | 0.1 | 0.3 | -- | 0.2 | -- | -- | 0.9 | 0.2 | 0.3 | 0.4 | 1.1 | 0.2 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **A-4** | **A-4** | **A-4** | **A-4** | **A-5** | **A-5** | **A-5** | **A-5** | **A-6** | **A-6 DUP** | **A-6** | **A-7** | | |
| Sample ID | A-4 0-1 | A-4 1-2 | A-4 2-3 | A-4 3-4 | A-5 | A-5 1-2 | A-5 2-3 | A-5 4-5 | A-6 1-2 | A-6 DUP 1-2 | A-6 4-5 | A-7 | | |
| Sample Depth (feet) | 0-1 | 1-2 | 2-3 | 3-4 | 0-5 | 1-2 | 2-3 | 4-5 | 1-2 | 1-2 | 4-5 | 0-5 | | |
| Sample Date | 12/29/2023 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 23L0931-07 | 23L0931-08 | 23L0931-09 | 23L0931-10 | 24E0050-01 | 24E0051-04 | 24E0814-09 | 24E0051-13 | 24E0051-05 | 24E0051-18 | 24E0051-14 | 24E0050-05 | | |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.07 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.07 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.07 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.07 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.06 | < 0.06 | 0.3 | 0.08 | < 0.05 | < 0.05 | < 0.06 | 0.1 | < 0.05 | < 0.05 | < 0.07 | 0.1 | -- | -- |
| PCB Aroclor 1254 | < 0.06 | 0.5 | 1.3 D | 0.6 | 0.1 | 0.3 | 0.09 | 0.2 | < 0.05 | < 0.05 | 0.09 | 0.3 | -- | -- |
| PCB Aroclor 1260 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.07 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.07 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.07 | < 0.06 | -- | -- |
| Total PCBs | -- | 0.5 | 1.6 | 0.68 | 0.1 | 0.3 | 0.09 | 0.3 | -- | -- | 0.09 | 0.4 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **A0** | **A0** | **A0-5W** | **A0-10W** | **A0-10W** | **A0-20N10W** | **A0-20N10W** | **A0.5** | **AA-1** | **AA-1** | **AA-1** | | |
| Sample ID | A0 0-1 | A-0 1-2 | A0-5W 0-1 | A0-10W 0-1 | A0-10W 2-3 | A0-20N10W 0-1 | A0-20N10W 1-2 | A0.5 0-1 | AA-1 0-1 | AA-1 1-2 | AA-1 2-3 | | |
| Sample Depth (feet) | 0-1 | 1-2 | 0-1 | 0-1 | 2-3 | 0-1 | 1-2 | 0-1 | 0-1 | 1-2 | 2-3 | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 7/17/2024 | 7/17/2024 | 7/17/2024 | 7/17/2024 | 7/17/2024 | 7/17/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 24G0151-02 | 24E0051-01 | 24G1155-03 | 24G0737-01 | 24G0737-02 | 24G0737-03 | 24G0737-04 | 24G0736-01 | 24G0454-02 | 24E0029-07 | 24E0814-03 | | |
| **PCBs (mg/kg)** | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 10.4 | < 0.05 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 0.05 | < 6.6 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 10.4 | < 0.05 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 0.05 | < 6.6 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 10.4 | < 0.05 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 0.05 | < 6.6 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 10.4 | < 0.05 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 0.05 | < 6.6 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 10.4 | < 0.05 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 0.05 | < 6.6 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | 125 D | 0.4 | 4.5 D | 15.7 D | 0.4 | 0.3 | < 0.05 | 68 D | < 0.05 | < 0.05 | 0.2 | -- | -- |
| PCB Aroclor 1260 | < 10.4 | < 0.05 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 0.05 | < 6.6 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 10.4 | < 0.05 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 0.05 | < 6.6 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 10.4 | < 0.05 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 0.05 | < 6.6 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| Total PCBs | 125 | 0.4 | 4.5 | 15.7 | 0.4 | 0.3 | -- | 68 | -- | -- | 0.2 | 1 | 4 |

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 2
Site 1 - Soil PCBs
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **AA-1** | **AA-2** | **AA-2** | **AA-2** | **AA-3** | **AA-3** | **AA-3** | **AA-3** | **AA-4** | **AA-4 DUP** | **AA-4** | **AA-4** | | |
| Sample ID | AA-1 4-5 | AA-2 1-2 | AA-2 DUP 1-2 | AA-2 4-5 | AA-3 0-1 | AA-3 1-2 | AA-3 2-3 | AA-3 3-4 | AA-4 1-2 | AA-4 DUP 1-2 | AA-4 2-3 | AA-4 4-5 | | |
| Sample Depth (feet) | 4-5 | 1-2 | 1-2 | 4-5 | 0-1 | 1-2 | 2-3 | 3-4 | 1-2 | 1-2 | 2-3 | 4-5 | | |
| Sample Date | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 6/20/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | | |
| Laboratory Sample ID | 24E0027-06 | 24E0029-08 | 24E0029-09 | 24E0027-07 | 23L0931-04 | 23L0931-05 | 23L0931-06 | 24F0928-15 | 24E0029-10 | 24E0027-09 | 24E0814-08 | 24E0027-08 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.1 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1254 | 0.6 | 1.4 D | 0.6 | 0.6 | 0.1 | 0.7 | 0.2 | 0.4 | 0.6 | 0.4 | 0.5 | 0.2 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| Total PCBs | 0.6 | 1.4 | 0.6 | 0.6 | 0.1 | 0.8 | 0.2 | 0.4 | 0.6 | 0.4 | 0.5 | 0.2 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **AA-5** | **AA-5** | **AA-6** | **AA-6** | **AA-8.5** | **AA0** | **AA0** | **AA0 DUP** | **AA0** | **AA0.5** | **B-1** | **B-1** | | |
| Sample ID | AA-5 1-2 | AA-5 4-5 | AA-6 1-2 | AA-6 4-5 | **AA-8.5** | AA0 0-1 | AA-0 1-2 | AA-0 DUP 1-2 | AA-0 4-5 | AA0.5 0-1 | B-1 0-1 | B-1 1-2 | | |
| Sample Depth (feet) | 1-2 | 4-5 | 1-2 | 4-5 | 0-5 | 0-1 | 1-2 | 1-2 | 4-5 | 0-1 | 0-1 | 1-2 | | |
| Sample Date | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 7/17/2024 | 5/1/2024 | 5/1/2024 | | |
| Laboratory Sample ID | 24E0027-10 | 24E0027-11 | 24E0027-12 | 24E0027-13 | 24E0026-09 | 24G0454-01 | 24E0029-05 | 24E0029-06 | 24E0027-05 | 24G0736-02 | 24G0151-03 | 24E0051-07 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | 0.06 | 0.2 | < 0.05 | 0.08 | 0.2 | 2 D | 0.2 | 0.2 | 0.2 | 7.1 D | 2.5 D | < 0.05 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.2 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| Total PCBs | 0.06 | 0.2 | -- | 0.08 | 0.2 | 2 | 0.2 | 0.2 | 0.4 | 7.1 | 2.5 | -- | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **B-1** | **B-2** | **B-2** | **B-2** | **B-3** | **B-3** | **B-3** | **B-3** | **B-4** | **B-5** | **B-5** | **B-5** | | |
| Sample ID | B-1 4-5 | B-2 0-1 | B-2 1-2 | B-2 4-5 | B-3 0-1 | B-3 1-2 | B-3 2-3 | B-3 2-3 | B-4 2-3 | B-5 1-2 | B-5 2-3 | B-5 4-5 | | |
| Sample Depth (feet) | 4-5 | 0-1 | 1-2 | 4-5 | 0-1 | 1-2 | 2-3 | 2-3 | 2-3 | 1-2 | 2-3 | 4-5 | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 6/20/2024 | 6/20/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | | |
| Laboratory Sample ID | 24E0051-15 | 24G0453-07 | 24E0051-08 | 24E0051-16 | 23L0931-11 | 23L0931-12 | 23L0932-01 | 24F0928-13 | 24F0928-13 | 24E0051-09 | 24E0814-10 | 24E0051-17 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | 0.3 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | 0.4 | < 0.06 | < 0.05 | 0.2 | < 0.05 | 0.09 | 0.09 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | 0.2 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| Total PCBs | 0.7 | -- | -- | 0.2 | -- | 0.09 | 0.09 | -- | -- | -- | -- | 0.2 | 1 | 4 |

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 2
Site 1 - Soil PCBs
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **B-6** | **B0** | **B0** | **B0** | **B0** | **B0-10E** | **B0-10E** | **B0-10N** | **B0-10N15E** | **B0-10N15W** | **B0-10N15E** | **B0-10N15W** | | |
| Sample ID | B-6 1-2 | B0 0-1 | B-0 1-2 | B0 2-3 | B0 3-4 | B0-10E 0-1 | B0-10E 2-3 | B0-10N 0-1 | B0-10N15E 2-3 | B0-10N15W 2-3 | B0-10N15E 0-1 | B0-10N15W 0-1 | | |
| Sample Depth (feet) | 1-2 | 0-1 | 1-2 | 2-3 | 3-4 | 0-1 | 2-3 | 0-1 | 2-3 | 2-3 | 0-1 | 0-1 | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 6/21/2024 | 6/21/2024 | 6/21/2024 | 7/2/2024 | 7/2/2024 | 7/2/2024 | 7/2/2024 | | |
| Laboratory Sample ID | 24E0051-10 | 24E0814-04 | 24E0051-06 | 24E0814-05 | 24E0814-06 | 24F0929-09 | 24G0151-05 | 24F0929-05 | 24G0453-04 | 24G0453-01 | 24G0152-05 | 24G0152-01 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 23.1 | < 5.8 | < 0.05 | < 0.05 | < 270 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 5.3 | < 10.9 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 23.1 | < 5.8 | < 0.05 | < 0.05 | < 270 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 5.3 | < 10.9 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 23.1 | < 5.8 | < 0.05 | < 0.05 | < 270 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 5.3 | < 10.9 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 23.1 | < 5.8 | < 0.05 | < 0.05 | < 270 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 5.3 | < 10.9 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 23.1 | < 5.8 | < 0.05 | < 0.05 | < 270 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 5.3 | < 10.9 | -- | -- |
| PCB Aroclor 1254 | < 0.05 | 240 D | 102 D | 0.07 | 0.1 | 3040 D | 0.8 | 12.8 D | 0.07 | 0.2 | 83.1 D | 174 D | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 23.1 | < 5.8 | < 0.05 | < 0.05 | < 270 | < 0.05 | < 1 | < 0.05 | 0.06 | < 5.3 | < 10.9 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 23.1 | < 5.8 | < 0.05 | < 0.05 | < 270 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 5.3 | < 10.9 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 23.1 | < 5.8 | < 0.05 | < 0.05 | < 270 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 5.3 | < 10.9 | -- | -- |
| Total PCBs | -- | 240 | 102 | 0.07 | 0.1 | 3040 | 0.8 | 12.8 | 0.07 | 0.26 | 83.1 | 174 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **B0-10S** | **B0-10S** | **B0-10S15E** | **B0-10S15W** | **B0-10S15E** | **B0-10S15W** | **B0-10W** | **B0-10W** | **B0-15E** | **B0-15N15E** | **B0-15N15W** | **B0-15W** | | |
| Sample ID | B0-10S 0-1 | B0-10S 2-3 | B0-10S15E 2-3 | B0-10S15W 2-3 | B0-10S15E 0-1 | BO-10S15W 0-1 | B0-10W 0-1 | B0-10W 2-3 | B0-15E 0-1 | B0-15N15E 0-1 | B0-15N15W 0-1 | B0-15W 0-1 | | |
| Sample Depth (feet) | 0-1 | 2-3 | 2-3 | 2-3 | 0-1 | 0-1 | 0-1 | 2-3 | 0-1 | 0-1 | 0-1 | 0-1 | | |
| Sample Date | 6/21/2024 | 6/21/2024 | 7/2/2024 | 7/2/2024 | 7/2/2024 | 7/2/2024 | 6/21/2024 | 6/21/2024 | 7/2/2024 | 7/17/2024 | 7/17/2024 | 7/2/2024 | | |
| Laboratory Sample ID | 24F0928-20 | 24G0151-06 | 24G0453-06 | 24G0453-03 | 24G0152-08 | 24G0152-04 | 24F0929-02 | 24G0151-07 | 24G0152-06 | 24G1155-02 | 24G1155-01 | 24G0152-02 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 21.2 | < 0.05 | < 0.06 | < 0.06 | < 2.8 | < 21.3 | < 10.2 | < 0.05 | < 10.4 | < 5.1 | < 5.1 | < 26.5 | -- | -- |
| PCB Aroclor 1221 | < 21.2 | < 0.05 | < 0.06 | < 0.06 | < 2.8 | < 21.3 | < 10.2 | < 0.05 | < 10.4 | < 5.1 | < 5.1 | < 26.5 | -- | -- |
| PCB Aroclor 1232 | < 21.2 | < 0.05 | < 0.06 | < 0.06 | < 2.8 | < 21.3 | < 10.2 | < 0.05 | < 10.4 | < 5.1 | < 5.1 | < 26.5 | -- | -- |
| PCB Aroclor 1242 | < 21.2 | < 0.05 | < 0.06 | < 0.06 | < 2.8 | < 21.3 | < 10.2 | < 0.05 | < 10.4 | < 5.1 | < 5.1 | < 26.5 | -- | -- |
| PCB Aroclor 1248 | < 21.2 | < 0.05 | < 0.06 | < 0.06 | < 2.8 | < 21.3 | < 10.2 | < 0.05 | < 10.4 | < 5.1 | < 5.1 | < 26.5 | -- | -- |
| PCB Aroclor 1254 | 317 D | 0.4 | 6.3 D | 0.08 | 54.3 D | 257 D | 139 D | 0.5 | 136 D | 49.9 D | 72.2 D | 456 D | -- | -- |
| PCB Aroclor 1260 | < 21.2 | < 0.05 | < 0.06 | < 0.06 | < 2.8 | < 21.3 | < 10.2 | < 0.05 | < 10.4 | < 5.1 | < 5.1 | < 26.5 | -- | -- |
| PCB Aroclor 1262 | < 21.2 | < 0.05 | < 0.06 | < 0.06 | < 2.8 | < 21.3 | < 10.2 | < 0.05 | < 10.4 | < 5.1 | < 5.1 | < 26.5 | -- | -- |
| PCB Aroclor 1268 | < 21.2 | < 0.05 | < 0.06 | < 0.06 | < 2.8 | < 21.3 | < 10.2 | < 0.05 | < 10.4 | < 5.1 | < 5.1 | < 26.5 | -- | -- |
| Total PCBs | 317 | 0.4 | 6.3 | 0.08 | 54.3 | 257 | 139 | 0.5 | 136 | 49.9 | 72.2 | 456 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **B0-20E** | **B0-20E** | **B0-20N15E** | **B0-20N15W** | **B0-20N15W** | **B0-20W** | **B0-20W** | **B0-5E** | **B0-5N** | **B0-5S** | **B0-5W** | **BB-0** | | |
| Sample ID | B0-20E 0-1 | B0-20E 2-3 | B0-20N15E 0-1 | B0-20N15W 0-1 | B0-20N15W 1-2 | B0-20W 0-1 | B0-20W 2-3 | B0-5E 0-1 | B0-5N 0-1 | B0-5S 0-1 | B0-5W 0-1 | BB-0 0-1 | | |
| Sample Depth (feet) | 0-1 | 2-3 | 0-1 | 0-1 | 1-2 | 0-1 | 2-3 | 0-1 | 0-1 | 0-1 | 0-1 | 0-1 | | |
| Sample Date | 7/2/2024 | 7/2/2024 | 7/17/2024 | 7/17/2024 | 7/17/2024 | 7/2/2024 | 7/2/2024 | 6/21/2024 | 6/21/2024 | 6/21/2024 | 6/21/2024 | 12/29/2023 | | |
| Laboratory Sample ID | 24G0152-07 | 24G0453-05 | 24G0736-07 | 24G0736-08 | 24G0736-09 | 24G0152-03 | 24G0453-02 | 24F0929-04 | 24F0929-06 | 24F0929-03 | 24F0929-01 | 23L0932-02 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 5.4 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 5.6 | < 0.05 | < 5.1 | < 2.6 | < 10.2 | < 10.1 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 5.4 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 5.6 | < 0.05 | < 5.1 | < 2.6 | < 10.2 | < 10.1 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 5.4 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 5.6 | < 0.05 | < 5.1 | < 2.6 | < 10.2 | < 10.1 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 5.4 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 5.6 | < 0.05 | < 5.1 | < 2.6 | < 10.2 | < 10.1 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 5.4 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 5.6 | < 0.05 | < 5.1 | < 2.6 | < 10.2 | < 10.1 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | 67.6 D | 0.2 | 3.1 D | 0.5 | 0.1 | 81.8 D | 0.3 | 93.7 D | 35.3 D | 180 D | 167 D | 0.8 | -- | -- |
| PCB Aroclor 1260 | < 5.4 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 5.6 | < 0.05 | < 5.1 | < 2.6 | < 10.2 | < 10.1 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 5.4 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 5.6 | < 0.05 | < 5.1 | < 2.6 | < 10.2 | < 10.1 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 5.4 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 5.6 | < 0.05 | < 5.1 | < 2.6 | < 10.2 | < 10.1 | < 0.05 | -- | -- |
| Total PCBs | 67.6 | 0.2 | 3.1 | 0.5 | 0.1 | 81.8 | 0.3 | 93.7 | 35.3 | 180 | 167 | 0.8 | 1 | 4 |

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 2
Site 1 - Soil PCBs
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **BB-0** | **BB-0** | **BB-0** | **BB-1** | **BB-1** | **BB-1** | **BB-1** | **BB-1** | **BB-1** | **BB-2** | **BB-2** | **BB-2** | | |
| Sample ID | BB-0 1-2 | BB-0 2-3 | BB-0 3-4 | BB-1 0-1 | BB-1 1-2 | BB-1 2-3 | BB-1 | BB-1 3-4 | BB-1 4-5 | BB-2 1-2 | BB-2 2-3 | BB-2 3-4 | | |
| Sample Depth (feet) | 1-2 | 2-3 | 3-4 | 0-1 | 1-2 | 2-3 | 0-5 | 3-4 | 4-5 | 1-2 | 2-3 | 3-4 | | |
| Sample Date | 12/29/2023 | 12/29/2023 | 6/20/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 4/30/2024 | 6/20/2024 | 6/20/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | | |
| Laboratory Sample ID | 23L0932-03 | 23L0932-04 | 24F0928-18 | 23L0932-05 | 23L0932-06 | 23L0932-07 | 24E0026-08 | 24F0928-17 | 24F0927-10 | 23L0932-08 | 23L0932-09 | 23L0932-10 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | 0.1 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | 0.09 | -- | -- |
| PCB Aroclor 1254 | < 0.06 | 1.5 D | 0.2 | < 0.06 | 0.3 | 0.7 | 0.6 | 0.7 | 0.5 | < 0.06 | 0.5 | 0.4 | -- | -- |
| PCB Aroclor 1260 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | 0.1 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| Total PCBs | 0 | 1.5 | 0.2 | 0 | 0.3 | 0.8 | 0.7 | 0.7 | 0.5 | -- | 0.5 | 0.49 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **BB-3** | **BB-3** | **BB-3** | **BB-4** | **BB-4** | **BB-5** | **BB-5** | **BB-5** | **BB-6** | **BB-6** | **BB-7** | **C-1** | | |
| Sample ID | BB-3 | BB-3 1-2 | BB-3 4-5 | BB-4 1-2 | BB-4 4-5 | BB-5 | BB-5 1-2 | BB-5 4-5 | BB-6 1-2 | BB-6 4-5 | BB-7 | C-1 | | |
| Sample Depth (feet) | 0-5 | 1-2 | 4-5 | 1-2 | 4-5 | 0-5 | 1-2 | 4-5 | 1-2 | 4-5 | 0-5 | 0-5 | | |
| Sample Date | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 5/2/2024 | | |
| Laboratory Sample ID | 24E0026-07 | 24E0029-04 | 24E0027-04 | 24E0029-03 | 24E0027-03 | 24E0026-06 | 24E0029-02 | 24E0027-02 | 24E0029-01 | 24E0027-01 | 24E0026-05 | 24E0124-01 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | 0.08 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1254 | 0.2 | 0.4 | 0.3 | 0.08 | 0.09 | 0.07 | 0.2 | 0.08 | < 0.06 | 0.09 | 0.06 | 0.2 | -- | -- |
| PCB Aroclor 1260 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| Total PCBs | 0.2 | 0.4 | 0.3 | 0.08 | 0.09 | 0.07 | 0.2 | 0.08 | -- | 0.09 | 0.14 | 0.2 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **C-1** | **C-1** | **C-2** | **C-2** | **C-2** | **C-2** | **C-3** | **C-3** | **C-3** | **C-4** | **C-4** | **C-4** | | |
| Sample ID | C-1 0-1 | C-1 1-2 | C-2 0-1 | C-2 1-2 | C-2 2-3 | C-2 3-4 | C-3 | C-3 1-2 | C-3 4-5 | C-4 0-1 | C-4 1-2 | C-4 2-3 | | |
| Sample Depth (feet) | 0-1 | 1-2 | 0-1 | 1-2 | 2-3 | 3-4 | 0-5 | 1-2 | 4-5 | 0-1 | 1-2 | 2-3 | | |
| Sample Date | 5/2/2024 | 5/2/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | | |
| Laboratory Sample ID | 24G0151-04 | 24E0125-05 | 23L0932-11 | 23L0932-12 | 23L0932-13 | 23L0932-14 | 24E0124-02 | 24E0125-04 | 24E0125-06 | 23L0932-15 | 23L0932-16 | 23L0932-17 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | 0.1 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | 0.2 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | 0.3 | 0.08 | < 0.05 | < 0.06 | < 0.05 | 0.1 | 0.1 | -- | -- |
| PCB Aroclor 1260 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| Total PCBs | 0.2 | -- | -- | -- | -- | 0.4 | 0.08 | -- | -- | -- | 0.1 | 0.1 | 1 | 4 |

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 2
Site 1 - Soil PCBs
New Bedford Marine Commerce Terminal
New Bedford, MA

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | **MCP Concentrations** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **C-5** | **C-5** | **C-5** | **C-6** | **C-7** | **C0** | **C0** | **C0 DUP** | **C0** | **C0.5** | **CC-1** | **CC-1** | | |
| Sample ID | C-5 | C-5 1-2 | C-5 4-5 | C-6 1-2 | C-7 | C0 0-1 | C0 1-2 | C0 DUP 1-2 | C0 4-5 | C0.5 0-1 | CC-1 3-4 | CC-1 1-2 | | |
| Sample Depth (feet) | 0-5 | 1-2 | 4-5 | 1-2 | 0-5 | 0-1 | 1-2 | 1-2 | 4-5 | 0-1 | 3-4 | 1-2 | | |
| Sample Date | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/17/2024 | 4/25/2024 | 4/29/2024 | | |
| Laboratory Sample ID | 24E0124-03 | 24E0125-03 | 24E0125-01 | 24E0125-02 | 24E0124-04 | 24G0151-01 | 24E0050-08 | 24E0050-10 | 24E0050-09 | 24G0736-03 | 24E0814-01 | 24D1045-10 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | 0.1 | -- | -- |
| PCB Aroclor 1254 | 0.1 | < 0.05 | 0.2 | 0.1 | < 0.05 | 3.4 D | < 0.05 | < 0.05 | 0.3 | 9.3 D | 8.2 D | 0.5 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.1 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| Total PCBs | 0.1 | -- | 0.2 | 0.1 | -- | 3.4 | -- | -- | 0.4 | 9.3 | 8.2 | 0.6 | 1 | 4 |

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | **MCP Concentrations** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **CC-1** | **CC-2** | **CC-2 DUP** | **CC-2** | **CC0** | **CC0** | **CC0** | **CEC-1-1** | **CEC-1-1** | **CEC-1-2** | **CEC-2-1** | **CEC-2-1** | | |
| Sample ID | CC-1 5-6 | CC-2 1-2 | CC-2 DUP 1-2 | CC-2 4-5 | CC-0 3-4 | CC-0 1-2 | CC-0 5-6 | CEC-1-1 0-4 | CEC-1-1 8-9.5 | CEC-1-2 0-4 | CEC-2-1 0-4 | CEC-2-1 8.8-10 | | |
| Sample Depth (feet) | 5-6 | 1-2 | 1-2 | 4-5 | 3-4 | 1-2 | 5-6 | 0-4 | 8-9.5 | 0-4 | 0-4 | 8.8-10 | | |
| Sample Date | 6/20/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/25/2024 | 4/29/2024 | 6/20/2024 | 11/9/2023 | 11/9/2023 | 12/5/2023 | 11/9/2023 | 11/9/2023 | | |
| Laboratory Sample ID | 24F0928-10 | 24D1045-10 | 24D1045-19 | 24D1045-16 | 24E0814-02 | 24D1045-08 | 24F0928-09 | 23K0414-01 | 23K0414-02 | 23L0197-04 | 23K0414-05 | 23K0414-06 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.3 | < 0.05 | < 0.06 | < 0.08 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.3 | < 0.05 | < 0.06 | < 0.08 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.3 | < 0.05 | < 0.06 | < 0.08 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.3 | < 0.05 | < 0.06 | < 0.08 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.3 | < 0.05 | < 0.06 | < 0.08 | -- | -- |
| PCB Aroclor 1254 | 0.6 | 0.2 | < 0.05 | 0.6 | 2.5 D | 0.08 | 0.2 | 0.1 | < 0.3 | 0.4 | < 0.06 | < 0.08 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.3 | < 0.05 | < 0.06 | < 0.08 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.3 | < 0.05 | < 0.06 | < 0.08 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.3 | < 0.05 | < 0.06 | < 0.08 | -- | -- |
| Total PCBs | 0.6 | 0.2 | -- | 0.6 | 2.5 | 0.08 | 0.2 | 0.1 | -- | 0.4 | -- | -- | 1 | 4 |

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | **MCP Concentrations** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **CEC-2-2** | **CEC-3-1** | **CEC-3-2** | **CEC-4-1** | **CEC-4-1** | **CEC-4-2** | **CEC-4-2** | **CEC-5-1** | **CEC-5-1** | **CEC-5-2** | **CEC-6-2** | **CEC-7-2** | | |
| Sample ID | CEC-2-2 0-4 | CEC-3-1 0-4 | CEC-3-2 0.3-4 | CEC-4-1 0-4 | CEC-4-1 8-10 | CEC-4-2 0-4 | CEC-4-2 4.5-7.5 | CEC-5-1 0-4 | CEC-5-1 8-10 | CEC-5-2 0-4 | CEC-6-2 0-4 | CEC-7-2 0-4 | | |
| Sample Depth (feet) | 0-4 | 0-4 | 0.3-4 | 0-4 | 8-10 | 0-4 | 4.5-5.75 | 0-4 | 8-10 | 0-4 | 0-4 | 0-4 | | |
| Sample Date | 12/6/2023 | 11/10/2023 | 12/6/2023 | 11/9/2023 | 11/9/2023 | 12/5/2023 | 12/5/2023 | 11/10/2023 | 11/10/2023 | 12/6/2023 | 12/6/2023 | 12/5/2023 | | |
| Laboratory Sample ID | 23L0197-12 | 23K0414-09 | 23L0197-11 | 23K0414-03 | 23K0414-04 | 23L0197-05 | 23L0197-06 | 23K0414-08 | 23K0414-07 | 23L0197-09 | 23L0197-10 | 23L0197-07 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 1.1 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 1.1 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 1.1 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 1.1 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | 0.2 | < 0.05 | < 0.05 | < 0.06 | < 1.1 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | 0.1 | 0.6 | < 0.05 | < 0.05 | < 0.06 | 11.2 D | < 0.05 | < 0.05 | < 0.06 | 0.06 | 0.09 | 0.4 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 1.1 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 1.1 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 1.1 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | -- | -- |
| Total PCBs | 0.1 | 0.8 | -- | -- | -- | 11.2 | -- | -- | -- | 0.06 | 0.09 | 0.4 | 1 | 4 |

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 2
Site 1 - Soil PCBs
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **CEC-7-2** | **CEC-7-2** | **CEC-8-2** | **CEC-8-2** | **D-0** | **D-0** | **D-0** | **D-1** | **D-1** | **D-1** | **D-2** | **D-3** | | |
| Sample ID | CEC-7-2 4-8 | CEC-7-2 8-10 | CEC-8-2 2-4 | CEC-8-2 4-8 | D-0 0-1 | D-0 1-2 | D-0 2-3 | D-1 0-1 | D-1 1-2 | D-1 2-3 | D-2 1-2 | D-3 0-1 | | |
| Sample Depth (feet) | 4-8 | 8-10 | 2-4 | 4-8 | 0-1 | 1-2 | 2-3 | 0-1 | 1-2 | 2-3 | 1-2 | 0-1 | | |
| Sample Date | 12/5/2024 | 12/5/2024 | 12/5/2023 | 12/5/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 5/2/2024 | 12/29/2023 | | |
| Laboratory Sample ID | 23L0197-08 | 23L0197-01 | 23L0197-02 | 23L0197-03 | 23L0933-01 | 23L0933-02 | 23L0933-03 | 23L0933-04 | 23L0933-05 | 23L0933-06 | 24E0125-08 | 23L0933-07 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | 0.3 | 0.3 | 6.9 D | 3.5 D | 0.3 | < 0.05 | < 0.05 | 0.2 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1260 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| Total PCBs | 0.3 | 0.3 | 6.9 | 3.5 | 0.3 | -- | -- | 0.2 | -- | -- | -- | -- | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **D-3** | **D-3** | **D-4** | **D-4** | **D-8.5** | **D0.5** | **DD-1** | **DD-1** | **DD-1** | **DD-2** | **DD-3** | **DD-5** | | |
| Sample ID | D-3 1-2 | D-3 2-3 | D-4 1-2 | D-4 4-5 | D-8.5 | D0.5 0-1 | DD-1 | DD-1 1-2 | DD-1 4-5 | DD-2 3-4 | DD-3 | DD-5 | | |
| Sample Depth (feet) | 1-2 | 2-3 | 1-2 | 4-5 | 0-5 | 0-1 | 0-5 | 1-2 | 4-5 | 3-4 | 0-5 | 0-5 | | |
| Sample Date | 12/29/2023 | 12/29/2023 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 7/17/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 6/20/2024 | 4/30/2024 | 4/30/2024 | | |
| Laboratory Sample ID | 23L0933-08 | 23L0933-09 | 24E0125-07 | 24E0125-09 | 24E0124-05 | 24G0736-04 | 24D1044-18 | 24D1045-09 | 24D1045-14 | 24F0928-12 | 24E0026-03 | 24E0026-02 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.1 | 0.08 | 0.1 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | < 0.05 | 0.2 | 0.09 | 0.1 | 0.1 | 0.8 | 0.6 | 0.4 | 0.4 | < 0.05 | 0.09 | 0.08 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| Total PCBs | -- | 0.2 | 0.09 | 0.1 | 0.1 | 0.8 | 0.7 | 0.48 | 0.5 | -- | 0.09 | 0.08 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **DD-7** | **DD0** | **DD0** | **E-1** | **E-1** | **E-1** | **E-1** | **E-2** | **E-2** | **E-2** | **E-3** | **E-3** | | |
| Sample ID | DD-7 | DD-0 1-2 | DD-0 4-5 | E-1 | E-1 0-1 | E-1 1-2 | E-1 4-5 | E-2 1-2 | E-2 DUP 1-2 | E-2 4-5 | E-3 0-3 | E-3 3-7 | | |
| Sample Depth (feet) | 0-5 | 1-2 | 4-5 | 0-5 | 0-1 | 1-2 | 4-5 | 1-2 | 1-2 | 4-5 | 0-3 | 3-7 | | |
| Sample Date | 4/30/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/3/2024 | 5/3/2024 | 5/3/2024 | 5/3/2024 | 5/3/2024 | | |
| Laboratory Sample ID | 24E0026-01 | 24D1045-07 | 24D1045-13 | 24E0124-08 | 24E0814-11 | 24E0125-10 | 24E0125-15 | 24E0126-01 | 24E0126-03 | 24E0126-02 | 24E0124-16 | 24E0124-17 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.05 | 0.4 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | < 0.05 | 0.06 | 0.8 | 0.1 | 0.3 | 0.09 | 0.3 | 0.07 | 0.07 | 0.2 | 0.1 | 0.2 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | 0.1 | < 0.05 | < 0.05 | 0.07 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| Total PCBs | -- | 0.06 | 1.2 | 0.1 | 0.3 | 0.09 | 0.4 | 0.07 | 0.07 | 0.27 | 0.1 | 0.2 | 1 | 4 |

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 2
Site 1 - Soil PCBs
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **E-5** | **E-7** | **E0** | **E0** | **E0** | **E0.5** | **E0.5 DUP** | **EE-1** | **EE-2** | **EE-8.5** | **EE0** | **EE0.5** | | |
| Sample ID | E-5 | E-7 | E-0 0-1 | E-0 1-2 | E-0 2-3 | E0.5 0-1 | E0.5 Dup | EE-1 3-4 | EE-2 3-4 | EE-8.5 | EE-0 1-2 | EE-0.5 | | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-1 | 1-2 | 2-3 | 0-1 | 0-1 | 3-4 | 3-4 | 0-5 | 1-2 | 0-5 | | |
| Sample Date | 5/2/2024 | 5/2/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 7/17/2024 | 7/17/2024 | 6/20/2024 | 6/20/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | | |
| Laboratory Sample ID | 24E0124-07 | 24E0124-06 | 23L0933-10 | 23L0933-11 | 23L0933-12 | 24G0736-05 | 24G0736-06 | 24F0928-08 | 24F0928-11 | 24D1044-13 | 24D1045-06 | 24D1044-14 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 1.1 | < 1.1 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 1.1 | < 1.1 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 1.1 | < 1.1 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 1.1 | < 1.1 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 1.1 | < 1.1 | < 0.06 | < 0.05 | 0.1 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1254 | 0.09 | < 0.06 | 0.1 | < 0.05 | < 0.05 | 19.9 D | 12.4 D | 0.1 | 0.2 | 0.2 | 0.3 | 0.08 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 1.1 | < 1.1 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 1.1 | < 1.1 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 1.1 | < 1.1 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| Total PCBs | 0.09 | -- | 0.1 | -- | -- | 19.9 | 12.4 | 0.1 | 0.2 | 0.3 | 0.3 | 0.08 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **F-0** | **F-0** | **F-0** | **F-0** | **F-1** | **F-1** | **F-2** | **F-2** | **F0.5** | **FF-1** | **FF-1** | **FF-1** | | |
| Sample ID | F-0 0-1 | F-0 1-2 | F-0 2-3 | F-0 3-4 | F-1 0-1 | F-1 1-2 | F-2 1-2 | F-2 4-5 | F-0.5 0-1 | FF-1 | FF-1 0-1 | FF-1 1-2 | | |
| Sample Depth (feet) | 0-1 | 1-2 | 2-3 | 3-4 | 0-1 | 1-2 | 1-2 | 4-5 | 0-1 | 0-5 | 0-1 | 1-2 | | |
| Sample Date | 12/29/2023 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 5/2/2024 | 5/2/2024 | 5/3/2024 | 5/3/2024 | 8/26/2024 | 4/29/2024 | 6/20/2024 | 6/20/2024 | | |
| Laboratory Sample ID | 23L0933-19 | 23L0933-13 | 23L0933-14 | 23L0933-15 | 24E0814-12 | 24E0125-12 | 24E0126-04 | 24E0126-05 | 24I0015-01 | 24D1044-12 | 24G0455-01 | 24F0928-06 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | 2.2 D | < 0.05 | < 0.05 | < 0.05 | 0.2 | 0.2 | 0.1 | 0.2 | 1 | 2.3 D | < 0.05 | 0.3 | -- | -- |
| PCB Aroclor 1260 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| Total PCBs | 2.2 | -- | -- | -- | 0.2 | 0.2 | 0.1 | 0.2 | 1 | 2.3 | -- | 0.3 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **FF-1** | **FF-1** | **FF-1** | **FF-2** | **FF-2** | **FF-3** | **FF-5** | **FF-7** | **FF0** | **FF0 DUP** | **FF0** | **G-1** | | |
| Sample ID | FF-1 2-3 | FF-1 3-4 | FF-1 4-5 | FF-2 1-2 | FF-2 4-5 | FF-3 | FF-5 | FF-7 | FF-0 1-2 | FF-0 DUP 1-2 | FF-0 4-5 | G-1 | | |
| Sample Depth (feet) | 2-3 | 3-4 | 4-5 | 1-2 | 4-5 | 0-5 | 0-5 | 0-5 | 1-2 | 1-2 | 4-5 | 0-5 | | |
| Sample Date | 6/20/2024 | 6/20/2024 | 6/20/2024 | 6/20/2024 | 6/20/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | | |
| Laboratory Sample ID | 24G0455-02 | 24G0455-03 | 24F0927-08 | 24F0928-07 | 24F0927-09 | 24D1044-11 | 24D1044-10 | 24D1044-09 | 24D1045-05 | 24D1045-18 | 24D1045-12 | 24E0124-11 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | 0.08 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1254 | 0.09 | 9.1 D | < 0.06 | 0.08 | < 0.06 | < 0.05 | < 0.05 | 0.07 | < 0.05 | < 0.05 | < 0.05 | 0.2 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | 0.1 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| Total PCBs | 0.09 | 9.1 | -- | 0.08 | -- | -- | -- | 0.15 | -- | -- | -- | 0.3 | 1 | 4 |

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 2
Site 1 - Soil PCBs
New Bedford Marine Commerce Terminal
New Bedford, MA

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | **MCP Concentrations** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **G-1** | **G-1** | **G-1** | **G-2** | **G-2** | **G-3** | **G-3** | **G-5** | **G-7** | **G0** | **G0.5** | **GG-1** | | |
| Sample ID | G-1 0-1 | G-1 1-2 | G-1 4-5 | G-2 1-2 | G-2 4-5 | G-3 0-4 | G-3 4-8 | G-5 | G-7 | G0 0-1 | G-0.5 0-1 | GG-1 1-2 | | |
| Sample Depth (feet) | 0-1 | 1-2 | 4-5 | 1-2 | 4-5 | 0-4 | 4-8 | 0-5 | 0-5 | 0-1 | 0-1 | 1-2 | | |
| Sample Date | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/3/2024 | 5/3/2024 | 5/1/2024 | 5/1/2024 | 5/2/2024 | 5/2/2024 | 6/21/2024 | 8/26/2024 | 6/20/2024 | | |
| Laboratory Sample ID | 24E0814-13 | 24E0125-13 | 24E0125-16 | 24E0126-06 | 24E0126-07 | 24E0050-06 | 24E0050-07 | 24E0124-10 | 24E0124-09 | 24F0929-10 | 24I0015-02 | 24F0928-05 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | 0.1 | < 0.05 | 0.2 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | 0.1 | 0.2 | 0.8 | 0.1 | 0.3 | < 0.05 | 0.1 | 0.1 | 0.2 | 0.4 | 0.9 | < 0.05 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.06 | 0.2 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| Total PCBs | 0.1 | 0.2 | 1 | 0.1 | 0.3 | -- | 0.2 | 0.1 | 0.4 | 0.4 | 0.9 | -- | 1 | 4 |

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | **MCP Concentrations** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **GG-1** | **GG-2** | **GG-2** | **GG0** | **H-0** | **H-0** | **H-0** | **H-1** | **H-1 DUP** | **H-1** | **H-8.5** | **H0.5** | | |
| Sample ID | GG-1 4-5 | GG-2 1-2 | GG-2 4-5 | GG-0 1-2 | H-0 0-1 | H-0 1-2 | H-0 2-3 | H-1 1-2 | H-1 DUP 1-2 | H-1 4-5 | H-8.5 | H-0.5 0-1 | | |
| Sample Depth (feet) | 4-5 | 1-2 | 4-5 | 1-2 | 0-1 | 1-2 | 2-3 | 1-2 | 1-2 | 4-5 | 0-5 | 0-1 | | |
| Sample Date | 6/20/2024 | 6/20/2024 | 6/20/2024 | 4/29/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 8/29/2024 | | |
| Laboratory Sample ID | 24F0927-07 | 24F0928-04 | 24F0927-06 | 24D1045-04 | 23L0933-16 | 23L0933-17 | 23L0933-18 | 24E0125-14 | 24E0125-11 | 24E0125-17 | 24E0124-12 | 24I0015-03 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | 0.2 | < 0.06 | < 0.06 | 0.07 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1254 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | 0.08 | 0.06 | 0.3 | 0.07 | 0.1 | 0.2 | 0.1 | 0.5 | -- | -- |
| PCB Aroclor 1260 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| Total PCBs | -- | -- | -- | -- | 0.08 | 0.06 | 0.5 | 0.07 | 0.1 | 0.27 | 0.1 | 0.5 | 1 | 4 |

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | **MCP Concentrations** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **HH-1** | **HH-3** | **HH-5** | **HH-7** | **HH0** | **HH0 DUP** | **HH0** | **HH0.5** | **HH-0.5** | **I-1** | **I-3** | **I-3** | | |
| Sample ID | HH-1 | HH-3 | HH-5 | HH-7 | HH-0 1-2 | HH-0 DUP 1-2 | HH-0 4-5 | HH-0.5 1-2 | HH-0.5 4-5 | I-1 | I-3 | **I-3 4-8** | | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-5 | 0-5 | 1-2 | 1-2 | 4-5 | 1-2 | 4-5 | 0-5 | 0-4 | 4-8 | | |
| Sample Date | 4/29/2024 | 4/30/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 6/20/2024 | 6/20/2024 | 5/2/2024 | 5/1/2024 | 6/21/2024 | | |
| Laboratory Sample ID | 24D1044-08 | 24E0026-04 | 24D1044-06 | 24D1044-05 | 24D1045-03 | 24D1045-17 | 24D1045-11 | 24F0928-03 | 24F0927-05 | 24E0124-15 | 24E0050-04 | 24F0927-02 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.05 | < 0.06 | 0.07 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1254 | 0.5 | 0.2 | < 0.06 | 0.09 | < 0.05 | < 0.05 | < 0.05 | 1.3 D | < 0.06 | < 0.05 | 0.1 | 0.3 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| Total PCBs | 0.5 | 0.2 | -- | 0.16 | -- | -- | -- | 1.3 | -- | -- | 0.1 | 0.3 | 1 | 4 |

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 2
Site 1 - Soil PCBs
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **I-5** | **I-7** | **I0.5** | **II-8.5** | **II-8.5** | **II0** | **II0.5** | **II0.5** | **II-0.5** | **J-0** | **J-0** | **J-0** | | |
| Sample ID | I-5 | I-7 | I-0.5 0-1 | II-8.5 | II-8.5 5-6 | II-0 1-2 | II-0.5 | II-0.5 1-2 | II-0.5 4-5 | J-0 0-1 | J-0 1-2 | J-0 2-3 | | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-1 | 0-5 | 5-6 | 1-2 | 0-5 | 1-2 | 4-5 | 0-1 | 1-2 | 2-3 | | |
| Sample Date | 5/2/2024 | 5/2/2024 | 8/29/2024 | 4/29/2024 | 5/3/2024 | 4/29/2024 | 4/29/2024 | 6/20/2024 | 6/20/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 24E0124-14 | 24E0124-13 | 24I0015-04 | 24D1044-03 | 24E0124-18 | 24D1045-01 | 24D1044-04 | 24F0928-02 | 24F0927-04 | 23L0931-13 | 23L0931-14 | 23L0931-15 | | |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | 0.2 | < 0.06 | 0.1 | < 0.1 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1254 | 0.1 | 0.3 | 0.8 | 0.08 | < 0.1 | < 0.05 | 1.2 D | 0.4 | 0.09 | < 0.05 | < 0.06 | 0.2 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| Total PCBs | 0.1 | 0.5 | 0.8 | 0.18 | -- | -- | 1.2 | 0.4 | 0.09 | -- | -- | 0.2 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|
| Location | **J-0** | **JJ/II-2** | **JJ/II-6** | **JJ0** | **JJ0.5** | **JJ0.5** | | |
| Sample ID | J-0 3-4 | JJ/II-2 | JJ/II-6 | JJ-0 1-2 | JJ-0.5 1-2 | JJ-0.5 4-5 | | |
| Sample Depth (feet) | 3-4 | 0-5 | 0-5 | 1-2 | 1-2 | 4-5 | | |
| Sample Date | 12/29/2023 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 6/20/2024 | 6/20/2024 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 23L0931-16 | 24D1044-02 | 24D1044-01 | 24D1045-02 | 24F0928-01 | 24F0927-03 | | |
| **PCBs (mg/kg)** | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | 0.2 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1254 | 0.3 | < 0.05 | < 0.05 | < 0.05 | 0.1 | 0.6 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| Total PCBs | 0.5 | -- | -- | -- | 0.1 | 0.6 | 1 | 4 |

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 3
Site 2 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| **Site 2 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **CEC-1-4** | **CEC-10-4** | **CEC-14-4** | **CEC-15-4** | **CEC-2-3** | **CEC-2-4** | **CEC-3-3** | **CEC-4-3** | **CEC-5-3** | **CEC-5-4** | **CEC-6-3** | **CEC-6-3** | **CEC-6-4** | **MCP Concentrations** |
| Sample ID | CEC-1-4 | CEC-10-4 | CEC-14-4 | CEC-15-4 | CEC-2-3 | CEC-2-4 | CEC-3-3 | CEC-4-3 | CEC-5-3 | CEC-5-4 | CEC-6-3 | CEC-6-3 | CEC-6-4 | |
| Sample Depth (feet) | 0-4 | 0-5 | 0.6-4.6 | 0.6-4.6 | 0-6 | 0-4 | 0-4 | 0-4 | 0-4 | 0-4 | 0-4 | 5-7 | 0-4 | |
| Sample Date | 11/13/2023 | 9/19/2024 | 9/18/2024 | 9/18/2024 | 11/13/2023 | 11/13/2023 | 11/10/2023 | 11/10/2023 | 11/10/2023 | 11/13/2023 | 9/19/2024 | 9/19/2024 | 11/13/2023 | **RCS-1** |
| Laboratory Sample ID | 23K0441-01 | 24I0766-07 | 24I0766-02 | 24I0766-01 | 23K0440-04 | 23K0441-02 | 23K0440-01 | 23K0440-02 | 23K0440-03 | 23K0441-04 | 24I0766-10 | 24I0766-11 | 23K0441-03 | |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | |
| 1,1-Biphenyl | 0.05 | 0.03 | < 0.03 | < 0.03 | 0.08 D | < 0.05 | < 0.03 | 0.08 D | 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.05 | 0.05 |
| 2,4-Dinitrotoluene | < 0.28 | < 0.27 | < 0.27 | < 0.28 | < 0.55 | < 0.52 | < 0.28 | < 0.55 | < 0.28 | < 0.25 | < 0.28 | < 0.28 | < 0.54 | 0.7 |
| 2-Methylnaphthalene | < 0.28 | < 0.27 | < 0.27 | < 0.28 | < 0.55 | < 0.52 | < 0.28 | < 0.55 | < 0.28 | < 0.25 | < 0.28 | < 0.28 | < 0.54 | 0.7 |
| Acenaphthene | 0.55 | < 0.27 | < 0.27 | < 0.28 | 0.62 D | < 0.52 | < 0.28 | < 0.55 | < 0.28 | < 0.25 | < 0.28 | < 0.28 | < 0.54 | 4 |
| Acenaphthylene | < 0.28 | 0.65 | < 0.27 | 0.38 | < 0.55 | < 0.52 | < 0.28 | 2.60 D | 0.39 | < 0.25 | 0.59 | < 0.28 | < 0.54 | 2 |
| Anthracene | 0.97 | 0.95 | < 0.27 | 0.38 | 1.69 D | < 0.52 | < 0.28 | 4.89 D | 0.98 | < 0.25 | 0.41 | < 0.28 | < 0.54 | 1000 |
| Benzo(A)anthracene | 2.50 | 3.65 | 0.66 | 2.20 | 5.96 D | 0.70 D | < 0.28 | 13.50 D | 4.43 | 0.31 | 3.20 | < 0.28 | < 0.54 | 20 |
| Benzo(A)pyrene | 2.60 | 3.33 | 0.63 | 2.45 | 6.63 D | 0.81 D | < 0.28 | 13.20 D | 5.13 | 0.31 | 3.62 | < 0.28 | < 0.54 | 2 |
| Benzo(B)fluoranthene | 1.86 | 3.66 | 0.54 | 2.14 | 5.74 D | 0.64 D | < 0.28 | 10.00 D | 4.05 | 0.28 | 4.02 | < 0.28 | < 0.54 | 20 |
| Benzo(g,h,i)Perylene | 1.50 | 2.31 | 0.38 | 1.68 | 4.14 D | < 0.52 | < 0.28 | 6.80 D | 3.54 | < 0.25 | 2.47 | < 0.28 | < 0.54 | 1000 |
| Benzo(K)fluoranthene | 1.94 | 1.47 | 0.53 | 1.91 | 4.55 D | 0.62 D | < 0.28 | 10.50 D | 3.59 | < 0.25 | 1.56 | < 0.28 | < 0.54 | 200 |
| Chrysene | 2.51 | 3.70 | 0.64 | 2.00 | 5.63 D | 0.65 D | < 0.28 | 11.60 D | 4.21 | 0.30 | 3.02 | < 0.28 | < 0.54 | 200 |
| Dibenzo(A,H)anthracene | 0.38 | 0.41 | < 0.27 | 0.33 | 0.93 D | < 0.52 | < 0.28 | 1.81 D | 0.75 | < 0.25 | 0.44 | < 0.28 | < 0.54 | 2 |
| Dibenzofuran | 0.39 | < 0.27 | < 0.27 | < 0.28 | < 0.55 | < 0.52 | < 0.28 | 0.84 D | < 0.28 | < 0.25 | < 0.28 | < 0.28 | < 0.54 | -- |
| Fluoranthene | 4.32 | 5.97 | 1.71 | 4.88 | 10.10 D | 1.16 D | < 0.28 | 25.80 D | 8.45 | 0.63 | 5.24 | < 0.28 | < 0.54 | 1000 |
| Fluorene | 0.45 | 0.42 | < 0.27 | < 0.28 | 0.65 D | < 0.52 | < 0.28 | 0.88 D | 0.34 | < 0.25 | < 0.28 | < 0.28 | < 0.54 | 1000 |
| Indeno (1,2,3-cd) pyrene | 1.54 | 2.13 | 0.41 | 1.67 | 4.50 D | < 0.52 | < 0.28 | 7.93 D | 3.78 | < 0.25 | 2.51 | < 0.28 | < 0.54 | 20 |
| Naphthalene | < 0.28 | < 0.27 | < 0.27 | < 0.28 | 0.70 D | < 0.52 | < 0.28 | < 0.55 | < 0.28 | < 0.25 | < 0.28 | < 0.28 | < 0.54 | 4 |
| Phenanthrene | 4.37 | 3.71 | 0.92 | 1.11 | 6.32 D | 0.71 D | < 0.28 | 19.60 D | 3.20 | 0.43 | 0.87 | < 0.28 | < 0.54 | 10 |
| Pyrene | 5.24 | 7.21 | 1.12 | 3.33 | 11.60 D | 1.21 D | < 0.28 | 24.80 D | 9.13 | 0.59 | 5.25 | < 0.28 | < 0.54 | 1000 |
| **VPH (mg/kg)** | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.7 |
| Aliphatic Petroleum Hydrocarbons C19-C36 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Aliphatic Petroleum Hydrocarbons C5-C8 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Aliphatic Petroleum Hydrocarbons C9-C12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Aliphatic Petroleum Hydrocarbons C9-C18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Aromatic Petroleum Hydrocarbons C11-C22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Aromatic Petroleum Hydrocarbons C9-C10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Fluorene | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 |
| o-Xylenes | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Phenanthrene | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 10 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1254 | < 0.06 | -- | -- | -- | < 0.05 | < 0.05 | < 0.06 | < 0.05 | 0.3 | < 0.05 | -- | -- | < 0.06 | -- |
| PCB Aroclor 1260 | < 0.06 | -- | -- | -- | < 0.05 | < 0.05 | < 0.06 | < 0.05 | 0.1 | < 0.05 | -- | -- | < 0.06 | -- |
| PCB Aroclor 1262 | < 0.06 | -- | -- | -- | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- | < 0.06 | -- |
| PCB Aroclor 1268 | < 0.06 | -- | -- | -- | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- | < 0.06 | -- |
| Total PCBs | 0 | -- | -- | -- | 0 | 0 | 0 | 0 | 0.4 | 0 | -- | -- | 0 | 1 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | |
| Arsenic | 2.64 | -- | -- | -- | 3.42 | < 2.11 | < 2.31 | < 2.3 | < 2.13 | < 1.84 | -- | -- | < 1.83 | 20 |
| Barium | 39.2 | -- | -- | -- | 252 | 55.8 | 20.9 | 58 | 50.6 | 28.6 | -- | -- | 31.8 | 1000 |
| Beryllium | 0.32 | -- | -- | -- | 0.22 | 0.28 | 0.18 | 0.19 | 0.16 | 0.21 | -- | -- | 0.16 | 100 |
| Chromium | 13.8 | -- | -- | -- | 9.85 | 17 | 5.51 | 9.05 | 17.1 | 7.76 | -- | -- | 11 | 100 |
| Lead | 85.3 | -- | -- | -- | 113 | 43.2 | 7 | 101 | 86.5 | 113 | -- | -- | 27.2 | 200 |
| Mercury | 0.067 | -- | -- | -- | 0.096 | 0.055 | < 0.034 | 0.294 | 0.065 | 0.069 | -- | -- | 0.075 | 20 |
| Nickel | 8.95 | -- | -- | -- | 7.09 | 10 | 3.27 | 5.83 | 10.2 | 5.14 | -- | -- | 6.35 | 700 |
| Vanadium | 14.1 | -- | -- | -- | 15.4 | 26.6 | 10.3 | 11.1 | 15.7 | 13.3 | -- | -- | 12 | 500 |
| Zinc | 58.4 | -- | -- | -- | 181 | 51.2 | 15.3 | 75.7 | 43.3 | 34.1 | -- | -- | 26 | 1000 |

Notes:

Laboratory analytical results compared to RCS-1 Massachusetts Contingency Plan Standards.

SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls; VPH = Volatile Petroleum Hydrocarbons

All data reported in mg/kg = milligrams per kilogram.

D = identified in an analysis that has been diluted

< = not detected above laboratory reporting limit

-- = Not Tested

NS = No Standard

Exceeds MassDEP MCP RCS-1

Table 3
Site 2 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 2 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | MCP Concentrations |
|---|---|---|---|---|---|---|---|---|---|---|
| Location | **CEC-7-3** | **CEC-7-4** | **CEC-7-4** | **CEC-8-3** | **CEC-8-3** | **CEC-8-3** | **CEC-8-4** | **CEC-9-4** | **CEC-9-4** | |
| Sample ID | CEC-7-3 | CEC-7-4 | CEC-7-4 | CEC-8-3 | CEC-8-3 | CEC-8-3 | CEC-8-4 | CEC-9-4 | CEC-9-4 | |
| Sample Depth (feet) | 0-4 | 0-4 | 5-10 | 2-4 | 7-8 | 12-14.5 | 0-4 | 2-6 | 6-8 | |
| Sample Date | 9/19/2024 | 9/19/2024 | 9/19/2024 | 9/23/2024 | 9/23/2024 | 9/23/2024 | 9/19/2024 | 9/19/2024 | 9/19/2024 | RCS-1 |
| Laboratory Sample ID | 24I0766-09 | 24I0766-05 | 24I0766-06 | 24I0819-01 | 24I0819-02 | 24I0819-03 | 24I0766-08 | 24I0766-03 | 24I0766-04 | |
| **SVOCs (mg/kg)** | | | | | | | | | | |
| 1,1-Biphenyl | 0.06 | 0.04 | < 0.03 | < 0.03 | < 0.06 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 0.05 |
| 2,4-Dinitrotoluene | < 0.27 | < 0.28 | < 0.27 | < 0.29 | 1.13 | < 0.27 | < 0.27 | < 0.33 | < 0.28 | 0.7 |
| 2-Methylnaphthalene | < 0.27 | < 0.28 | < 0.27 | 4.47 | < 0.58 | < 0.27 | < 0.27 | < 0.33 | < 0.28 | 0.7 |
| Acenaphthene | 0.90 | 1.00 | < 0.27 | 0.54 | 1.31 | < 0.27 | < 0.27 | < 0.33 | < 0.28 | 4 |
| Acenaphthylene | 0.47 | 0.62 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | < 0.27 | < 0.33 | < 0.28 | 2 |
| Anthracene | 1.96 | 2.63 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | 0.29 | < 0.33 | < 0.28 | 1000 |
| Benzo(A)anthracene | 6.17 | 9.24 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | 0.86 | 0.34 | < 0.28 | 20 |
| Benzo(A)pyrene | 5.83 | 7.84 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | 0.95 | < 0.33 | < 0.28 | 2 |
| Benzo(B)fluoranthene | 6.72 | 7.96 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | 1.07 | 1.38 | < 0.28 | 20 |
| Benzo(g,h,i)Perylene | 3.39 | 4.38 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | 0.68 | 1.05 | < 0.28 | 1000 |
| Benzo(K)fluoranthene | 2.75 | 6.27 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | 0.40 | 0.60 | < 0.28 | 200 |
| Chrysene | 6.30 | 8.60 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | 0.86 | 0.52 | < 0.28 | 200 |
| Dibenzo(A,H)anthracene | 0.71 | 1.23 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | < 0.27 | < 0.33 | < 0.28 | 2 |
| Dibenzofuran | 0.51 | 0.43 | < 0.27 | < 0.29 | 0.63 | < 0.27 | < 0.27 | < 0.33 | < 0.28 | -- |
| Fluoranthene | 13.50 | 17.30 D | < 0.27 | < 0.29 | < 0.58 | < 0.27 | 1.75 | 0.54 | < 0.28 | 1000 |
| Fluorene | 0.80 | 0.93 | < 0.27 | 0.57 | 1.55 | < 0.27 | < 0.27 | < 0.33 | < 0.28 | 1000 |
| Indeno (1,2,3-cd) pyrene | 3.35 | 4.75 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | 0.65 | 0.97 | < 0.28 | 20 |
| Naphthalene | 0.39 | 0.29 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | < 0.27 | < 0.33 | < 0.28 | 4 |
| Phenanthrene | 9.12 | 10.40 | < 0.27 | 1.21 | 3.06 | < 0.27 | 1.02 | 0.40 | < 0.28 | 10 |
| Pyrene | 12.00 | 16.90 D | < 0.27 | 0.33 | < 0.58 | < 0.27 | 1.62 | 0.38 | < 0.28 | 1000 |
| **VPH (mg/kg)** | | | | | | | | | | |
| 2-Methylnaphthalene | -- | -- | -- | -- | < 0.24 | 3.62 | -- | -- | -- | 0.7 |
| Aliphatic Petroleum Hydrocarbons C19-C36 | -- | -- | -- | -- | 85.6 | 39.7 | -- | -- | -- | -- |
| Aliphatic Petroleum Hydrocarbons C5-C8 | -- | -- | -- | -- | < 13.2 | 12.7 | -- | -- | -- | -- |
| Aliphatic Petroleum Hydrocarbons C9-C12 | -- | -- | -- | -- | 140 D | 42.8 D | -- | -- | -- | -- |
| Aliphatic Petroleum Hydrocarbons C9-C18 | -- | -- | -- | -- | 649 | 262 | -- | -- | -- | -- |
| Aromatic Petroleum Hydrocarbons C11-C22 | -- | -- | -- | -- | 344 | 158 | -- | -- | -- | -- |
| Aromatic Petroleum Hydrocarbons C9-C10 | -- | -- | -- | -- | 155 | 48 | -- | -- | -- | -- |
| Fluorene | -- | -- | -- | -- | 0.84 | < 0.43 | -- | -- | -- | 1000 |
| o-Xylenes | -- | -- | -- | -- | 1.17 | 0.31 | -- | -- | -- | -- |
| Phenanthrene | -- | -- | -- | -- | 1.71 | 0.94 | -- | -- | -- | 10 |
| **PCBs (mg/kg)** | | | | | | | | | | |
| PCB Aroclor 1254 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| PCB Aroclor 1260 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| PCB Aroclor 1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| PCB Aroclor 1268 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Total PCBs | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1 |
| **Total Metals (mg/kg)** | | | | | | | | | | |
| Arsenic | -- | -- | -- | -- | -- | -- | -- | -- | -- | 20 |
| Barium | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 |
| Beryllium | -- | -- | -- | -- | -- | -- | -- | -- | -- | 100 |
| Chromium | -- | -- | -- | -- | -- | -- | -- | -- | -- | 100 |
| Lead | -- | -- | -- | -- | -- | -- | -- | -- | -- | 200 |
| Mercury | -- | -- | -- | -- | -- | -- | -- | -- | -- | 20 |
| Nickel | -- | -- | -- | -- | -- | -- | -- | -- | -- | 700 |
| Vanadium | -- | -- | -- | -- | -- | -- | -- | -- | -- | 500 |
| Zinc | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 |

Notes:
Laboratory analytical results compared to RCS-1 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls; VPH = Volatile Petroleum Hydrocarbons
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1

Table 4
Site 3 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 3 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | MCP Concentrations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | A'-1 | A'-3 | A'-5 | A'-7 | C'-1 | C'-3 | C'-5 | C'-7 | E'-1 | E'-3 | E'-5 | |
| Sample ID | A'-1 | A'-3 | A'-5 | A'-7 | C'-1 | C'-3 | C'-5 | C'-7 | E'-1 | E'-3 | E'-5 | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | |
| Sample Date | 7/1/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | |
| Laboratory Sample ID | 24G0131-07<br>24G0131-08 | 24G0131-09<br>24G0131-10 | 24G0131-11<br>24G0131-12 | 24G0131-13<br>24G0131-14 | 24G0132-05<br>24G0132-06 | 24G0132-03<br>24G0132-04 | 24G0132-01<br>24G0132-02 | 24G0132-19<br>24G0132-20 | 24G0132-11<br>24G0132-12 | 24G0132-13<br>24G0132-14 | 24G0132-15<br>24G0132-16 | RCS-2 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 6 |
| 2-Methylnaphthalene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 80 |
| Acenaphthene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 3000 |
| Acenaphthylene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 10 |
| Anthracene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 3000 |
| Benzo(A)anthracene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 300 |
| Benzo(A)pyrene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 30 |
| Benzo(B)fluoranthene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 300 |
| Benzo(g,h,i)Perylene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 3000 |
| Benzo(K)fluoranthene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 3000 |
| Chrysene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 3000 |
| Dibenzo(A,H)anthracene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 30 |
| Dibenzofuran | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | NS |
| Fluoranthene | 0.29 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 3000 |
| Fluorene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 3000 |
| Hydrocarbon, Oil, Petroleum | 41.4 | < 10.4 | 20 | 13.2 | < 10.5 | < 11.2 | 17.0 | 15.7 | < 11.1 | < 10.7 | < 11 | NS |
| Indeno (1,2,3-cd) pyrene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 300 |
| Naphthalene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 20 |
| Phenanthrene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 1000 |
| Pyrene | 0.34 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 3000 |
| **Total SVOCs** | 42.02 | 0 | 20 | 13.2 | 0 | 0 | 17 | 15.7 | 0 | 0 | 0 | NS |
| **Total Metals (mg/kg)** | | | | | | | | | | | | |
| Arsenic | 2.35 | 2.27 | 2.45 | 2.18 | 2.33 | 2.51 | 2.21 | 2.52 | 2.37 | 2.40 | 2.67 | 20 |
| Barium | 9.00 | 11.7 | 10.5 | 10.6 | 22.8 | 9.16 | 30.8 | 10.0 | 11.1 | 8.78 | 8.01 | 3000 |
| Cadmium | < 0.47 | < 0.45 | < 0.49 | < 0.44 | < 0.47 | < 0.5 | < 0.44 | < 0.5 | < 0.47 | < 0.48 | < 0.53 | 80 |
| Chromium | 8.09 | 8.95 | 6.43 | 6.81 | 7.6 | 7.21 | 7.13 | 8.76 | 6.12 | 6.58 | 5.72 | 200 |
| Lead | 12.4 | 12.2 | 10 | 12.1 | 32.8 | 12.2 | 73.7 | 11.2 | 10.7 | 7.44 | 6.12 | 600 |
| Mercury | 0.05 | < 0.03 | < 0.03 | < 0.04 | 0.06 | < 0.04 | 0.05 | < 0.03 | < 0.03 | < 0.03 | < 0.04 | 40 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | |
| 4,4'-DDT | < 0.003 | < 0.003 | 0.010 | 0.007 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 30 |
| Dieldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.6 |
| **PCBs (mg/kg)** | | | | | | | | | | | | |
| PCB Aroclor 1248 | < 0.06 | < 0.05 | 0.10 | 0.10 | < 0.05 | < 0.06 | < 0.05 | 0.08 | < 0.05 | < 0.05 | < 0.05 | -- |
| PCB Aroclor 1254 | < 0.06 | 0.10 | 0.20 | 0.20 | < 0.05 | 0.10 | 0.20 | 0.30 | < 0.05 | < 0.05 | 0.10 | -- |
| **Total PCBs** | 0 | 0.10 | 0.31 | 0.31 | 0 | 0.10 | 0.20 | 0.38 | 0 | 0 | 0.10 | 4 |

Notes:
Laboratory analytical results compared to RCS-2 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
Exceeds MassDEP MCP RCS-2

Table 4
Site 3 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 3 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | MCP Concentrations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | E'-7 | K-1 | K-3 | K-4.5 | L/M-1 | L/M-4.5 | L0 | M0 | N0 | O-0.5 | Q-0.5 | |
| Sample ID | E'-7 | K-1 | K-3 | K-4.5 | L/M-1 | L/M-4.5 | L0 0-1 | M0 0-1 | N0 0-1 | O-0.5 | Q-0.5 | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-1 | 0-1 | 0-1 | 0-5 | 0-5 | |
| Sample Date | 7/1/2024 | 7/2/2024 | | 7/2/2024 | 7/2/2024 | 7/2/2024 | 7/17/2024 | 7/17/2024 | 7/17/2024 | 7/2/2024 | 7/1/2024 | |
| Laboratory Sample ID | 24G0132-17<br>24G0132-18 | 24G0130-03<br>24G0130-04 | 24G0130-07<br>24G0130-08 | 24G0130-09<br>24G0130-10 | 24G0130-05<br>24G0130-06 | 24G0130-11<br>24G0130-12 | 24G0738-01 | 24G0738-02 | 24G0738-03 | 24G0130-01<br>24G0130-02 | 24G0131-09<br>24G0131-10 | RCS-2 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | -- | -- | -- | 0.24 | < 0.03 | 6 |
| 2-Methylnaphthalene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | < 0.28 | < 0.28 | -- | -- | -- | 0.87 | < 0.26 | 80 |
| Acenaphthene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | < 0.28 | < 0.28 | -- | -- | -- | 2.09 | < 0.26 | 3000 |
| Acenaphthylene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | < 0.28 | < 0.28 | -- | -- | -- | 0.71 | < 0.26 | 10 |
| Anthracene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | < 0.28 | < 0.28 | -- | -- | -- | 7.84 | < 0.26 | 3000 |
| Benzo(A)anthracene | < 0.27 | 0.33 | < 0.27 | < 0.26 | 0.37 | 0.50 | -- | -- | -- | 15.1 D | < 0.26 | 300 |
| Benzo(A)pyrene | < 0.27 | 0.39 | < 0.27 | < 0.26 | 0.43 | 0.41 | -- | -- | -- | 13.2 | < 0.26 | 30 |
| Benzo(B)fluoranthene | < 0.27 | 0.33 | < 0.27 | < 0.26 | 0.35 | 0.34 | -- | -- | -- | 12.3 | < 0.26 | 300 |
| Benzo(g,h,i)Perylene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | 0.37 | < 0.281 | -- | -- | -- | 7.43 | < 0.26 | 3000 |
| Benzo(K)fluoranthene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | 0.35 | 0.39 | -- | -- | -- | 9.13 | < 0.26 | 3000 |
| Chrysene | < 0.27 | 0.33 | < 0.27 | < 0.26 | 0.38 | 0.51 | -- | -- | -- | 13.6 D | < 0.26 | 3000 |
| Dibenzo(A,H)anthracene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | < 0.28 | < 0.28 | -- | -- | -- | 1.89 | < 0.26 | 30 |
| Dibenzofuran | < 0.27 | < 0.29 | < 0.27 | < 0.26 | < 0.28 | < 0.28 | -- | -- | -- | 2.32 | < 0.26 | NS |
| Fluoranthene | < 0.27 | 0.48 | < 0.27 | 0.29 | 0.62 | 0.98 | -- | -- | -- | 32 D | < 0.26 | 3000 |
| Fluorene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | < 0.28 | < 0.28 | -- | -- | -- | 3.26 | < 0.26 | 3000 |
| Hydrocarbon, Oil, Petroleum | < 10.30 | 55.7 | 64.5 | 45.9 | 29.8 | 64.2 | -- | -- | -- | 72.2 | 15.90 | NS |
| Indeno (1,2,3-cd) pyrene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | 0.33 | < 0.28 | -- | -- | -- | 8.47 | < 0.26 | 300 |
| Naphthalene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | < 0.28 | < 0.28 | -- | -- | -- | 2.47 | < 0.26 | 20 |
| Phenanthrene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | < 0.28 | < 0.28 | -- | -- | -- | 26.3 D | < 0.26 | 1000 |
| Pyrene | < 0.27 | 0.44 | < 0.27 | 0.28 | 0.59 | 0.80 | -- | -- | -- | 25.1 D | < 0.26 | 3000 |
| **Total SVOCs** | 0 | 58.0 | 64.5 | 46.47 | 34.96 | 69.53 | -- | -- | -- | 256.52 | 15.90 | NS |
| **Total Metals (mg/kg)** | | | | | | | | | | | | |
| Arsenic | 2.26 | 2.38 | 2.59 | 2.51 | 2.18 | 2.33 | -- | -- | -- | 2.59 | 2.23 | 20 |
| Barium | 10.6 | 77.3 | 28.4 | 32.9 | 104 | 16.8 | -- | -- | -- | 15.1 | 12.9 | 3000 |
| Cadmium | < 0.45 | < 0.48 | < 0.52 | < 0.5 | < 0.44 | < 0.47 | -- | -- | -- | < 0.52 | < 0.45 | 80 |
| Chromium | 7.58 | 10.3 | 9.71 | 10.2 | 10.5 | 7.29 | -- | -- | -- | 8.7 | 7.93 | 200 |
| Lead | 6.95 | 167 | 55.1 | 53.2 | 455 | 24.3 | -- | -- | -- | 48.3 | 31.4 | 600 |
| Mercury | < 0.03 | 0.06 | 0.07 | 0.06 | 0.07 | 0.05 | -- | -- | -- | 0.06 | 0.03 | 40 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | |
| 4,4'-DDT | < 0.003 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | 0.02 | 0.01 | 30 |
| Dieldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | 0.003 | < 0.003 | 0.6 |
| **PCBs (mg/kg)** | | | | | | | | | | | | |
| PCB Aroclor 1248 | < 0.05 | 0.08 | 0.10 | 0.07 | < 0.05 | 0.10 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | -- |
| PCB Aroclor 1254 | 0.07 | 0.20 | 0.10 | 0.20 | 0.10 | 0.10 | 2.9 D | 0.10 | 0.09 | 0.20 | 0.20 | -- |
| **Total PCBs** | 0.07 | 0.29 | 0.20 | 0.27 | 0.10 | 0.20 | 2.9 | 0.10 | 0.09 | 0.20 | 0.20 | 4 |

Notes:
Laboratory analytical results compared to RCS-2, S3 GW-2, and S3 GW-3 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
Exceeds MassDEP MCP RCS-2

Table 4
Site 3 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 3 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | MCP Concentrations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Q-7 | S-0.5 | S-7 | U-0.5 | U-7 | W-0.5 | W-7 | Y-0.5 | Y-3 | Y-5 | Y-7 | |
| Sample ID | Q-7 | S-0.5 | S-7 | U-0.5 | U-7 | W-0.5 | W-7 | Y-0.5 | Y-3 | Y-5 | Y-7 | |
| Sample Depth (feet) | 0-10 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | |
| Sample Date | 7/2/2024 | 7/1/2024 | 7/2/2024 | 7/1/2024 | 7/2/2024 | 7/1/2024 | 7/2/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | |
| Laboratory Sample ID | 24G0130-13<br>24G0130-14 | 24G0131-07<br>24G0131-08 | 24G0130-15<br>24G0130-16 | 24G0131-05<br>24G0131-06 | 24G0130-17<br>24G0130-18 | 24G0131-03<br>24G0131-04 | 24G0130-19<br>24G0130-20 | 24G0131-01<br>24G0131-02 | 24G0131-19<br>24G0131-20 | 24G0131-15<br>24G0131-16 | 24G0131-17<br>24G0131-18 | RCS-2 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 6 |
| 2-Methylnaphthalene | < 0.27 | < 0.28 | < 0.28 | < 0.27 | < 0.25 | < 0.25 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 80 |
| Acenaphthene | < 0.27 | < 0.28 | < 0.28 | < 0.27 | < 0.25 | < 0.25 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 3000 |
| Acenaphthylene | < 0.27 | < 0.28 | < 0.28 | < 0.27 | < 0.25 | < 0.25 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 10 |
| Anthracene | < 0.27 | 0.46 | < 0.28 | < 0.27 | < 0.25 | < 0.25 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 3000 |
| Benzo(A)anthracene | < 0.27 | 0.97 | < 0.28 | < 0.27 | < 0.25 | 0.41 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 300 |
| Benzo(A)pyrene | < 0.27 | 0.90 | < 0.28 | < 0.27 | < 0.25 | 0.51 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 30 |
| Benzo(B)fluoranthene | < 0.27 | 0.84 | < 0.28 | < 0.27 | < 0.25 | 0.34 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 300 |
| Benzo(g,h,i)Perylene | < 0.27 | 0.64 | < 0.28 | < 0.27 | < 0.25 | 0.45 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 3000 |
| Benzo(K)fluoranthene | < 0.27 | 0.75 | < 0.28 | < 0.27 | < 0.25 | 0.37 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 3000 |
| Chrysene | < 0.27 | 1.00 | < 0.28 | < 0.27 | < 0.25 | 0.44 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 3000 |
| Dibenzo(A,H)anthracene | < 0.27 | < 0.28 | < 0.28 | < 0.27 | < 0.25 | < 0.25 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 30 |
| Dibenzofuran | < 0.27 | < 0.28 | < 0.28 | < 0.27 | < 0.25 | < 0.25 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | NS |
| Fluoranthene | < 0.27 | 2.51 | < 0.28 | 0.52 | < 0.25 | 0.56 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 3000 |
| Fluorene | < 0.27 | < 0.28 | < 0.28 | < 0.27 | < 0.25 | < 0.254 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 3000 |
| Hydrocarbon, Oil, Petroleum | 30.9 | 18.8 | 11.4 | 26.1 | < 10.5 | 56.9 | < 10.6 | 46.1 | 25.2 | < 10.6 | 10.8 | NS |
| Indeno (1,2,3-cd) pyrene | < 0.27 | 0.62 | < 0.28 | < 0.27 | < 0.25 | 0.33 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 300 |
| Naphthalene | < 0.27 | < 0.28 | < 0.28 | < 0.27 | < 0.25 | < 0.25 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 20 |
| Phenanthrene | < 0.27 | 2.16 | < 0.28 | < 0.27 | < 0.25 | < 0.25 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 1000 |
| Pyrene | < 0.27 | 1.81 | < 0.28 | 0.45 | < 0.25 | 0.81 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 3000 |
| **Total SVOCs** | 30.9 | 31.44 | 11.4 | 26.82 | 0 | 4.62 | 0 | 46.1 | 25.2 | 0 | 10.8 | NS |
| **Total Metals (mg/kg)** | | | | | | | | | | | | |
| Arsenic | 2.56 | 2.71 | 2.22 | 2.15 | 2.53 | 2.37 | 2.22 | 2.26 | 2.13 | 2.17 | 2.47 | 20 |
| Barium | 13 | 20.9 | 11.7 | 19.3 | 10.1 | 24 | 6.88 | 11 | 8.96 | 7.84 | 8.04 | 3000 |
| Cadmium | < 0.51 | < 0.54 | < 0.44 | < 0.43 | < 0.51 | < 0.47 | < 0.44 | < 0.45 | < 0.43 | < 0.43 | < 0.49 | 80 |
| Chromium | 8.35 | 15.3 | 11 | 14 | 5.74 | 21.5 | 6.42 | 6.65 | 5.41 | 5.38 | 6.87 | 200 |
| Lead | 17 | 47.6 | 14.1 | 43.3 | 7.9 | 36.2 | 9.57 | 11 | 14.4 | 7.24 | 7.14 | 600 |
| Mercury | 0.10 | 0.131 | < 0.03 | 0.11 | < 0.03 | 0.04 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 40 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | |
| 4,4'-DDT | 0.010 | 0.024 | 0.009 | 0.01 | 0.003 | 0.01 | 0.003 | 0.005 | < 0.003 | < 0.003 | 0.004 | 30 |
| Dieldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.6 |
| **PCBs (mg/kg)** | | | | | | | | | | | | |
| PCB Aroclor 1248 | 0.09 | 0.20 | 0.06 | < 0.05 | < 0.05 | 0.10 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | -- |
| PCB Aroclor 1254 | 0.20 | 0.60 | 0.10 | 0.20 | < 0.05 | 0.30 | < 0.05 | < 0.05 | < 0.05 | 0.07 | < 0.05 | -- |
| **Total PCBs** | 0.29 | 0.80 | 0.16 | 0.20 | 0.00 | 0.41 | 0 | 0 | 0 | 0.07 | 0 | 4 |

Notes:
Laboratory analytical results compared to RCS-2, S3 GW-2, and S3 GW-3 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
Exceeds MassDEP MCP RCS-2

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | A-1 | A-3 | A-5 | A-7 | AA-8.5 | BB-1 | BB-3 | BB-5 | BB-7 | C-1 | | | | |
| Sample ID | A-1 | A-3 | A-5 | A-7 | AA-8.5 | BB-1 | BB-3 | BB-5 | BB-7 | C-1 | | | | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-4 | 0-4 | | | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 5/2/2024 | | | | |
| Laboratory Sample ID | 24E0050-03 | 24E0050-02 | 24E0050-01 | 24E0050-05 | 24E0026-09 | 24E0026-08 | 24E0026-07 | 24E0026-06 | 24E0026-05 | 24E0124-01 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,1,1-Trichloroethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 30 | 600 | -- | -- |
| 1,1,2,2-Tetrachloroethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.005 | 0.02 | -- | -- |
| 1,1,2-Trichloroethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.1 | 2 | -- | -- |
| 1,1-Dichloroethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.4 | 9 | -- | -- |
| 1,1-Dichloroethylene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 3 | 40 | -- | -- |
| 1,1-Dichloropropene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,2,3-Trichlorobenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,2,3-Trichloropropane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 2 | 6 | -- | -- |
| 1,2-Dibromo-3-chloropropane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,2-Dibromoethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichlorobenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 9 | 100 | -- | -- |
| 1,2-Dichloroethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichloropropane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,3,4-Trimethylbenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,3,5-Trimethylbenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,3-Dichlorobenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 3 | 200 | -- | -- |
| 1,3-Dichloropropane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,4-Dioxane | < 0.086 | < 0.096 | < 0.095 | < 0.12 | < 0.092 | < 0.111 | < 0.098 | < 0.101 | < 0.094 | < 0.108 | 0.2 | 5 | -- | -- |
| 2,2-Dichloropropane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 4-Isopropyltoluene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Acetone | < 0.043 | < 0.048 | < 0.048 | < 0.0599 | < 0.046 | < 0.056 | < 0.049 | < 0.050 | < 0.047 | < 0.054 | 6 | 50 | -- | -- |
| Benzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 2 | 200 | -- | -- |
| Bromobenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Bromochloromethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Bromodichloromethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| Bromoform | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.1 | 1 | -- | -- |
| Bromomethane | < 0.009 | < 0.010 | < 0.010 | < 0.012 | < 0.009 | < 0.011 | < 0.010 | < 0.010 | < 0.009 | < 0.011 | 0.5 | 0.5 | -- | -- |
| Carbon Disulfide | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Carbon Tetrachloride | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 5 | 5 | -- | -- |
| Chlorobenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 1 | 3 | -- | -- |
| Chlorodibromomethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.005 | 0.03 | -- | -- |
| Chloroethane | < 0.009 | < 0.010 | < 0.010 | < 0.012 | < 0.009 | < 0.011 | < 0.010 | < 0.010 | < 0.009 | < 0.011 | -- | -- | -- | -- |
| Chloroform | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.2 | 0.2 | -- | -- |
| Cis-1,2-dichloroethylene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| cis-1,3-Dichloropropene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Dibromomethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Dichlorodifluoromethane | < 0.009 | < 0.010 | < 0.010 | < 0.012 | < 0.009 | < 0.011 | < 0.010 | < 0.010 | < 0.009 | < 0.011 | -- | -- | -- | -- |
| Dichloromethane | < 0.022 | < 0.024 | < 0.024 | < 0.03 | < 0.023 | < 0.028 | < 0.025 | < 0.025 | < 0.024 | < 0.027 | 0.1 | 3 | -- | -- |
| Diisopropyl Ether | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Ethyl benzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 40 | 1000 | -- | -- |
| Ethyl ether | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Ethyl tert-butyl ether | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Fluorotrichloromethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Hexachlorobutadiene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 30 | 100 | -- | -- |
| Hexachloroethane | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.7 | 3 | -- | -- |
| Isopropyl benzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| m,p-Xylenes | < 0.009 | < 0.010 | < 0.010 | < 0.012 | < 0.009 | < 0.011 | < 0.010 | < 0.010 | < 0.009 | < 0.011 | -- | -- | -- | -- |
| Methyl Chloride | < 0.009 | < 0.010 | < 0.010 | < 0.012 | < 0.009 | < 0.011 | < 0.010 | < 0.010 | < 0.009 | < 0.011 | -- | -- | -- | -- |
| Methyl ethyl ketone | < 0.043 | < 0.048 | < 0.048 | < 0.060 | < 0.046 | < 0.056 | < 0.049 | < 0.050 | < 0.047 | < 0.054 | 4 | 50 | -- | -- |
| Methyl isobutyl ketone | < 0.043 | < 0.048 | < 0.048 | < 0.060 | < 0.046 | < 0.056 | < 0.049 | < 0.050 | < 0.047 | < 0.054 | 0.4 | 50 | -- | -- |
| Methyl n-butyl ketone | < 0.043 | < 0.048 | < 0.048 | < 0.060 | < 0.046 | < 0.056 | < 0.049 | < 0.050 | < 0.047 | < 0.054 | -- | -- | -- | -- |
| Methyl-tert-butyl ether | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.1 | 100 | -- | -- |
| n-Butylbenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| n-Propylbenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Naphthalene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 4 | 20 | -- | -- |
| O-chlorotoluene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| o-Xylenes | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| p-Chlorotoluene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| P-dichlorobenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.7 | 1 | -- | -- |
| sec-Butylbenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Styrene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 3 | 4 | -- | -- |
| Tert-amyl-methyl ether | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| tert-Butylbenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Tetrachloroethylene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 1 | 4 | -- | -- |
| Tetrahydrofuran | < 0.017 | < 0.019 | < 0.019 | < 0.024 | < 0.018 | < 0.022 | < 0.020 | < 0.020 | < 0.019 | < 0.022 | -- | -- | -- | -- |
| Toluene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 30 | 1000 | -- | -- |
| Trans-1,2-dichloroethylene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 1 | 1 | -- | -- |
| trans-1,3-Dichloropropene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Trichloroethylene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.3 | 0.3 | -- | -- |
| Vinyl Chloride | < 0.009 | < 0.010 | < 0.010 | < 0.012 | < 0.009 | < 0.011 | < 0.010 | < 0.010 | < 0.009 | < 0.011 | 0.3 | 0.7 | -- | -- |
| Xylene | < 0.009 | < 0.010 | < 0.010 | < 0.012 | < 0.009 | < 0.011 | < 0.010 | < 0.010 | < 0.009 | < 0.011 | 100 | 100 | -- | -- |
| Total VOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -- | -- | 10 | 4 |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | A-1 | A-3 | A-5 | A-7 | AA-8.5 | BB-1 | BB-3 | BB-5 | BB-7 | C-1 | | | | |
| Sample ID | A-1 | A-3 | A-5 | A-7 | AA-8.5 | BB-1 | BB-3 | BB-5 | BB-7 | C-1 | | | | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-4 | 0-4 | | | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 5/2/2024 | | | | |
| Laboratory Sample ID | 24E0050-03 | 24E0050-02 | 24E0050-01 | 24E0050-05 | 24E0026-09 | 24E0026-08 | 24E0026-07 | 24E0026-06 | 24E0026-05 | 24E0124-01 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 0.05 | 6 | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 2 | 6 | -- | -- |
| 1,2-Dichlorobenzene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 9 | 100 | -- | -- |
| 1,3-Dichlorobenzene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 3 | 200 | -- | -- |
| 2,4,5-Trichlorophenol | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 4 | 600 | -- | -- |
| 2,4,6-Trichlorophenol | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 20 | -- | -- |
| 2,4-Dichlorophenol | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 40 | -- | -- |
| 2,4-Dimethylphenol | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 100 | -- | -- |
| 2,4-Dinitrophenol | < 1.15 | < 1.11 | < 1.12 | < 1.12 | < 1.10 | < 1.11 | < 1.15 | < 1.10 | < 1.11 | < 1.11 | 3 | 50 | -- | -- |
| 2,4-Dinitrotoluene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 10 | -- | -- |
| 2,6-Dinitrotoluene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| 2-Chloronaphthalene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| 2-Chlorophenol | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 100 | -- | -- |
| 2-Methylnaphthalene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 80 | -- | -- |
| 2-Methylphenol | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| 2-Nitrophenol | < 0.57 | < 0.55 | < 0.56 | < 0.56 | < 0.55 | < 0.56 | < 0.58 | < 0.55 | < 0.56 | < 0.55 | -- | -- | -- | -- |
| 3 & 4 Methylphenol | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| 3,3'-Dichlorobenzidine | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 3 | 20 | -- | -- |
| 4-Bromophenyl phenyl ether | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| 4-Nitrophenol | < 1.15 | < 1.11 | < 1.12 | < 1.12 | < 1.10 | < 1.11 | < 1.15 | < 1.1 | < 1.11 | < 1.11 | -- | -- | -- | -- |
| Acenaphthene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 4 | 3000 | -- | -- |
| Acenaphthylene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.48 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 2 | 10 | -- | -- |
| Acetophenone | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| Aniline | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| Anthracene | < 0.29 | 1.41 | < 0.28 | < 0.28 | 0.67 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 1000 | 3000 | -- | -- |
| Azobenzene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| Benzo(A)anthracene | 0.33 | 7.33 | 0.51 | < 0.28 | 2.38 | 0.45 | 0.32 | 0.28 | < 0.28 | < 0.28 | 20 | 300 | -- | -- |
| Benzo(A)pyrene | 0.35 | 7.30 | 0.52 | < 0.28 | 2.33 | 0.49 | 0.32 | 0.30 | < 0.28 | < 0.28 | 2 | 30 | -- | -- |
| Benzo(B)fluoranthene | < 0.29 | 6.25 | 0.39 | < 0.28 | 2.53 | 0.52 | 0.35 | 0.29 | < 0.28 | < 0.28 | 20 | 300 | -- | -- |
| Benzo(g,h,i)Perylene | 0.45 | 4.44 | 0.37 | < 0.28 | 1.52 | 0.36 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 1000 | 3000 | -- | -- |
| Benzo(K)fluoranthene | < 0.29 | 4.84 | 0.32 | < 0.28 | 0.97 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 200 | 3000 | -- | -- |
| bis (2-chloroethoxy) Methane | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| bis (2-chloroethyl) Ether | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 0.7 | -- | -- |
| bis (2-chloroisopropyl) Ether | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 0.7 | -- | -- |
| Bis (2-ethylhexyl) phthalate | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | 0.40 | 100 | 700 | -- | -- |
| Butylbenzylphthalate | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| Chrysene | 0.31 | 6.28 | 0.48 | < 0.28 | 2.27 | 0.44 | 0.34 | 0.31 | < 0.28 | < 0.28 | 200 | 3000 | -- | -- |
| Di-n-octyl phthalate | < 0.57 | < 0.55 | < 0.56 | < 0.56 | < 0.55 | < 0.56 | < 0.58 | < 0.55 | < 0.56 | < 0.55 | -- | -- | -- | -- |
| Dibenzo(A,H)anthracene | < 0.29 | 1.28 | < 0.28 | < 0.28 | 0.35 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 2 | 30 | -- | -- |
| Dibenzofuran | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| Diethyl phthalate | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 10 | 200 | -- | -- |
| Dimethyl phthalate | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 50 | -- | -- |
| Fluoranthene | 0.69 | 10.00 | 0.92 | < 0.28 | 5.39 | 0.87 | 0.60 | 0.50 | 0.42 | < 0.28 | 1000 | 3000 | -- | -- |
| Fluorene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 1000 | 3000 | -- | -- |
| Hexachlorobenzene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 0.9 | -- | -- |
| Hexachlorobutadiene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 30 | 100 | -- | -- |
| Hexachloroethane | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 3 | -- | -- |
| Indeno (1,2,3-cd) pyrene | < 0.29 | 5.31 | 0.34 | < 0.28 | 1.46 | 0.35 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 20 | 300 | -- | -- |
| Isophorone | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| N-dibutyl phthalate | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| n-Nitrosodimethylamine | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| Naphthalene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 4 | 20 | -- | -- |
| Nitrobenzene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| P-chloroaniline | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 1 | 3 | -- | -- |
| P-dichlorobenzene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 1 | -- | -- |
| Pentachlorophenol | < 1.15 | < 1.11 | < 1.12 | < 1.12 | < 1.1 | < 1.11 | < 1.15 | < 1.1 | < 1.11 | < 1.11 | 3 | 10 | -- | -- |
| Phenanthrene | 0.37 | 3.82 | 0.58 | < 0.28 | 2.83 | 0.47 | 0.34 | 0.29 | < 0.28 | < 0.28 | 10 | 1000 | -- | -- |
| Phenols | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.9 | 20 | -- | -- |
| Pyrene | 0.64 | 9.49 | 1.07 | < 0.28 | 4.59 | 0.74 | 0.54 | 0.51 | 0.40 | < 0.28 | 1000 | 3000 | -- | -- |
| Pyridine | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| **Total SVOCs** | 3.15 | 67.75 | 5.51 | 0 | 27.77 | 4.70 | 2.82 | 2.48 | 0.81 | 0.40 | -- | -- | 100 | 100 |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | |
| C9-C36 | 31.3 | 36.2 | 39.1 | 14 | 66.4 | 42.5 D | 21.9 | 16.4 | 18.8 | < 11 | -- | -- | -- | -- |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | **MCP Concentrations** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | A-1 | A-3 | A-5 | A-7 | AA-8.5 | BB-1 | BB-3 | BB-5 | BB-7 | C-1 | | | | |
| Sample ID | A-1 | A-3 | A-5 | A-7 | AA-8.5 | BB-1 | BB-3 | BB-5 | BB-7 | C-1 | | | | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-4 | 0-4 | | | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 5/2/2024 | | | | |
| Laboratory Sample ID | 24E0050-03 | 24E0050-02 | 24E0050-01 | 24E0050-05 | 24E0026-09 | 24E0026-08 | 24E0026-07 | 24E0026-06 | 24E0026-05 | 24E0124-01 | **RCS-1** | **RCS-2** | **Landfills Lined** | **Landfills Unlined** |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | |
| 2,2-Dichloropropionic acid | < 0.049 | < 0.048 | < 0.048 | < 0.051 | < 0.048 | < 0.049 | < 0.049 | < 0.05 | < 0.049 | < 0.05 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxyacetic acid | < 0.01 | < 0.01 | < 0.01 | < 0.011 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxypropionic acid | < 0.01 | < 0.01 | < 0.01 | < 0.011 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | -- | -- | -- | -- |
| 2,4-Dichlorophenoxyacetic acid | < 0.05 | < 0.05 | < 0.05 | < 0.052 | < 0.049 | < 0.05 | < 0.051 | < 0.052 | < 0.051 | < 0.051 | -- | -- | -- | -- |
| 2-(2-Methyl-1,4-chlorophenoxy) propionic acid | < 2.51 | 2.48 | 2.48 | 2.62 | < 2.47 | < 2.52 | < 2.56 | < 2.58 | < 2.54 | < 2.56 | -- | -- | -- | -- |
| 4,4'-DDD | < 0.003 | < 0.003 | < 0.003 | 0.01 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 10 | 40 | -- | -- |
| 4,4'-DDE | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 7 | 30 | -- | -- |
| 4,4'-DDT | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 7 | 30 | -- | -- |
| 4-(2,4-dichlorophenoxy)-Butanoic acid | < 0.051 | < 0.050 | < 0.050 | < 0.053 | < 0.050 | < 0.051 | < 0.052 | < 0.052 | < 0.051 | < 0.052 | -- | -- | -- | -- |
| Aldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.5 | -- | -- |
| beta-BHC | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-delta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-gamma | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | 0.003 | 0.5 | -- | -- |
| Chlordane (mixture of isomers) | < 0.022 | < 0.022 | < 0.022 | < 0.022 | < 0.021 | < 0.023 | < 0.021 | < 0.023 | < 0.022 | < 0.021 | -- | -- | -- | -- |
| Chlordane, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Dicamba | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| chloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | < 0.050 | < 0.050 | < 0.050 | < 0.052 | < 0.049 | < 0.050 | < 0.051 | < 0.052 | < 0.051 | < 0.051 | -- | -- | -- | -- |
| Dieldrin | < 0.003 | 0.003 | 0.007 | < 0.003 | 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.6 | -- | -- |
| Dinoseb | < 0.051 | < 0.050 | < 0.050 | < 0.053 | < 0.050 | < 0.051 | < 0.052 | < 0.052 | < 0.051 | < 0.052 | -- | -- | -- | -- |
| Endosulfan sulfate | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, beta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 20 | 30 | -- | -- |
| Endrin ketone | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Heptachlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.3 | 2 | -- | -- |
| Heptachlor Epoxide | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.2 | 1 | -- | -- |
| Hexachlorobenzene | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.7 | 0.9 | -- | -- |
| Methoxychlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 300 | 400 | -- | -- |
| Methylchlorophenoxyacetic acid | < 2.480 | < 2.450 | < 2.450 | < 2.590 | < 2.450 | < 2.490 | < 2.530 | < 2.550 | < 2.510 | < 2.540 | -- | -- | -- | -- |
| Toxaphene | < 0.139 | < 0.136 | < 0.137 | < 0.140 | < 0.130 | < 0.144 | < 0.134 | < 0.141 | < 0.138 | < 0.133 | -- | -- | -- | -- |
| trans-Chlordane | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | 0.08 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.06 | < 0.05 | 0.1 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1254 | 0.1 | 0.3 | 0.1 | 0.3 | 0.2 | 0.6 | 0.2 | 0.07 | 0.06 | 0.2 | -- | -- | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | 0.1 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | | | | |
| PCB Aroclor 1262 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- | -- | -- |
| **Total PCBs** | 0.1 | 0.3 | 0.1 | 0.4 | 0.2 | 0.7 | 0.2 | 0.07 | 0.14 | 0.2 | 1 | 4 | < 2 | < 2 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | |
| Arsenic | 2.52 | 4.04 | 2.93 | 4.2 | 3.2 | 2.36 | 2.84 | 2.75 | 2.74 | 3.84 | 20 | 20 | 40 | 40 |
| Barium | 10.6 | 63.4 | 21 | 37.5 | 21.8 | 17.5 | 20.7 | 11.7 | 24 | 15.4 | 1000 | 3000 | -- | -- |
| Cadmium | < 0.41 | 0.52 | < 0.38 | < 0.42 | < 0.4 | < 0.39 | < 0.44 | < 0.42 | < 0.44 | < 0.41 | 80 | 80 | 80 | 30 |
| Chromium | 7.77 | 24.2 | 8.58 | 7.62 | 5.85 | 10.6 | 10.1 | 8.38 | 4.85 | 13.2 | 100 | 200 | 1000 | 1000 |
| Lead | 15.8 | 164 | 72.7 | 105 | 125 | 34 | 39.3 | 20.6 | 96 | 53.3 | 200 | 600 | 2000 | 1000 |
| Mercury | 0.06 | 0.118 | 0.15 | 0.44 | 0.20 | 0.08 | 0.13 | 0.08 | < 0.04 | < 0.04 | 20 | 40 | 10 | 10 |
| Selenium | < 4.09 | < 4.12 | < 3.79 | < 4.17 | < 4.02 | < 3.92 | < 4.43 | < 4.17 | < 4.44 | < 4.08 | 400 | 800 | -- | -- |
| Silver | < 0.41 | < 0.41 | < 0.38 | < 0.42 | < 0.4 | < 0.39 | < 0.44 | < 0.42 | < 0.44 | < 0.41 | 100 | 200 | -- | -- |
| **TCLP (mg/L)** | | | | | | | | | | | | | | |
| Lead TCLP (mg/L) | -- | 0.94 | -- | 1.12 | 1.9 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **General Chemistry** | | | | | | | | | | | | | | |
| Corrosivity (pH) | 7.9 | 8.08 | 8.34 | 8.48 | 6.91 | 7.79 | 8.31 | 7.7 | 6.72 | 8.02 | -- | -- | -- | -- |
| **Physical Conditions** | | | | | | | | | | | | | | |
| Flashpoint ($^{o}$F) | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | -- | -- | -- | -- |
| Reactivity - Cyanide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | -- | -- | -- | -- |
| Reactivity - Sulfide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | -- | -- | -- | -- |
| Specific Conductance @ 25$^{o}$C (µmhos/cm) | 50 | 134 | 141 | 51 | 8 | 255 | 89 | 49 | 9 | 123 | -- | -- | 8000 | 4000 |

Notes:
Laboratory analytical results compared to RCS-1, RCS-2, Massachusetts Contingency Plan Standards and Massachusetts COMM-97 Landfill standards.
VOCs = Volatile Organic Carbons; SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
D = identified in an analysis that has been diluted
P = pesticide target analyte had a % difference > 25% between 2 GC columns
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceedance of MassDEP MCP RCS-1
Exceedance of MassDEP MCP RCS-1 & RCS-2
Exceedance of COMM-97 - Lined Landfill criteria
Exceedance of COMM-97 - Unlined Landfill criteria

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | C-3 | C-5 | C-7 | D-8.5 | DD-1 | DD-3 | DD-5 | DD-7 | E-1 | E-3 | | | | |
| Sample ID | C-3 | C-5 | C-7 | D-8.5 | DD-1 | DD-3 | DD-5 | DD-7 | E-1 | E-3 0-3 | | | | |
| Sample Depth (feet) | 0-4.8 | 0-5 | 0-4.3 | 0-4 | 0-5 | 0-5 | 0-4.5 | 0-3 | 0-5 | 0-3 | | | | |
| Sample Date | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 5/2/2024 | 5/3/2024 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| Laboratory Sample ID | 24E0124-02 | 24E0124-03 | 24E0124-04 | 24E0124-05 | 24D1044-18 | 24E0026-03 | 24E0026-02 | 24E0026-01 | 24E0124-08 | 24E0124-16 | | | | |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.1 | 0.1 | -- | -- |
| 1,1,1-Trichloroethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 30 | 600 | -- | -- |
| 1,1,2,2-Tetrachloroethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.005 | 0.02 | -- | -- |
| 1,1,2-Trichloroethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.1 | 2 | -- | -- |
| 1,1-Dichloroethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.4 | 9 | -- | -- |
| 1,1-Dichloroethylene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 3 | 40 | -- | -- |
| 1,1-Dichloropropene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.608 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| 1,2,3-Trichlorobenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| 1,2,3-Trichloropropane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 2 | 6 | -- | -- |
| 1,2-Dibromo-3-chloropropane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 1.52 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| 1,2-Dibromoethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichlorobenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 9 | 100 | -- | -- |
| 1,2-Dichloroethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichloropropane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.1 | 0.1 | -- | -- |
| 1,3,4-Trimethylbenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| 1,3,5-Trimethylbenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| 1,3-Dichlorobenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 3 | 200 | -- | -- |
| 1,3-Dichloropropane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| 1,4-Dioxane | < 0.107 | < 0.098 | < 0.131 | < 0.126 | < 0.093 | < 0.091 | < 0.101 | < 30.4 | < 0.106 | < 0.131 | 0.2 | 5 | -- | -- |
| 2,2-Dichloropropane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| 4-Isopropyltoluene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Acetone | < 0.054 | < 0.049 | < 0.065 | < 0.063 | < 0.047 | < 0.045 | < 0.051 | < 1.52 | < 0.053 | < 0.066 | 6 | 50 | -- | -- |
| Benzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 2 | 200 | -- | -- |
| Bromobenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Bromochloromethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Bromodichloromethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.1 | 0.1 | -- | -- |
| Bromoform | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.1 | 1 | -- | -- |
| Bromomethane | < 0.011 | < 0.010 | < 0.013 | < 0.013 | < 0.009 | < 0.009 | < 0.010 | < 0.304 | < 0.011 | < 0.013 | 0.5 | 0.5 | -- | -- |
| Carbon Disulfide | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Carbon Tetrachloride | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 5 | 5 | -- | -- |
| Chlorobenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 1 | 3 | -- | -- |
| Chlorodibromomethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.005 | 0.03 | -- | -- |
| Chloroethane | < 0.011 | < 0.010 | < 0.013 | < 0.013 | < 0.009 | < 0.009 | < 0.010 | < 0.304 | < 0.011 | < 0.013 | -- | -- | -- | -- |
| Chloroform | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.2 | 0.2 | -- | -- |
| Cis-1,2-dichloroethylene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.1 | 0.1 | -- | -- |
| cis-1,3-Dichloropropene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Dibromomethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Dichlorodifluoromethane | < 0.011 | < 0.010 | < 0.013 | < 0.013 | < 0.009 | < 0.009 | < 0.010 | < 0.304 | < 0.011 | < 0.013 | -- | -- | -- | -- |
| Dichloromethane | < 0.027 | < 0.025 | < 0.033 | < 0.032 | < 0.023 | < 0.023 | < 0.025 | < 0.608 | < 0.027 | < 0.033 | 0.1 | 3 | -- | -- |
| Diisopropyl Ether | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Ethyl benzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 40 | 1000 | -- | -- |
| Ethyl ether | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Ethyl tert-butyl ether | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Fluorotrichloromethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Hexachlorobutadiene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 30 | 100 | -- | -- |
| Hexachloroethane | -- | -- | -- | -- | -- | -- | -- | < 0.304 | -- | -- | 0.7 | 3 | -- | -- |
| Isopropyl benzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| m,p-Xylenes | < 0.011 | < 0.010 | < 0.013 | < 0.013 | < 0.009 | < 0.009 | < 0.010 | < 0.608 | < 0.011 | < 0.013 | -- | -- | -- | -- |
| Methyl Chloride | < 0.011 | < 0.010 | < 0.013 | < 0.013 | < 0.009 | < 0.009 | < 0.010 | < 0.304 | < 0.011 | < 0.013 | -- | -- | -- | -- |
| Methyl ethyl ketone | < 0.054 | < 0.049 | < 0.065 | < 0.063 | < 0.047 | < 0.045 | < 0.051 | < 1.52 | < 0.053 | < 0.066 | 4 | 50 | -- | -- |
| Methyl isobutyl ketone | < 0.054 | < 0.049 | < 0.065 | < 0.063 | < 0.047 | < 0.045 | < 0.051 | < 1.52 | < 0.053 | < 0.066 | 0.4 | 50 | -- | -- |
| Methyl n-butyl ketone | < 0.054 | < 0.049 | < 0.065 | < 0.063 | < 0.047 | < 0.045 | < 0.051 | < 1.52 | < 0.053 | < 0.066 | -- | -- | -- | -- |
| Methyl-tert-butyl ether | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.1 | 100 | -- | -- |
| n-Butylbenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| n-Propylbenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Naphthalene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | 0.857 | < 0.005 | < 0.007 | 4 | 20 | -- | -- |
| O-chlorotoluene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| o-Xylenes | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| p-Chlorotoluene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| P-dichlorobenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.7 | 1 | -- | -- |
| sec-Butylbenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Styrene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 3 | 4 | -- | -- |
| Tert-amyl-methyl ether | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| tert-Butylbenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Tetrachloroethylene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 1 | 4 | -- | -- |
| Tetrahydrofuran | < 0.022 | < 0.020 | < 0.026 | < 0.025 | < 0.019 | < 0.018 | < 0.020 | < 1.52 | < 0.021 | < 0.026 | -- | -- | -- | -- |
| Toluene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 30 | 1000 | -- | -- |
| Trans-1,2-dichloroethylene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 1 | 1 | -- | -- |
| trans-1,3-Dichloropropene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Trichloroethylene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.3 | 0.3 | -- | -- |
| Vinyl Chloride | < 0.011 | < 0.010 | < 0.013 | < 0.013 | < 0.009 | < 0.009 | < 0.010 | < 0.304 | < 0.011 | < 0.013 | 0.3 | 0.7 | -- | -- |
| Xylene | < 0.011 | < 0.010 | < 0.013 | < 0.013 | < 0.009 | < 0.009 | < 0.010 | < 0.608 | < 0.011 | < 0.013 | 100 | 100 | -- | -- |
| Total VOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.857 | 0 | 0 | -- | -- | 10 | 4 |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | C-3 | C-5 | C-7 | D-8.5 | DD-1 | DD-3 | DD-5 | DD-7 | E-1 | E-3 | | | | |
| Sample ID | C-3 | C-5 | C-7 | D-8.5 | DD-1 | DD-3 | DD-5 | DD-7 | E-1 | E-3 0-3 | | | | |
| Sample Depth (feet) | 0-4.8 | 0-5 | 0-4.3 | 0-4 | 0-5 | 0-5 | 0-4.5 | 0-3 | 0-5 | 0-3 | | | | |
| Sample Date | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 5/2/2024 | 5/3/2024 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| Laboratory Sample ID | 24E0124-02 | 24E0124-03 | 24E0124-04 | 24E0124-05 | 24D1044-18 | 24E0026-03 | 24E0026-02 | 24E0026-01 | 24E0124-08 | 24E0124-16 | | | | |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 0.08 | < 0.03 | < 0.03 | 0.05 | 6 | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 2 | 6 | -- | -- |
| 1,2-Dichlorobenzene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 9 | 100 | -- | -- |
| 1,3-Dichlorobenzene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 3 | 200 | -- | -- |
| 2,4,5-Trichlorophenol | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 4 | 600 | -- | -- |
| 2,4,6-Trichlorophenol | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 20 | -- | -- |
| 2,4-Dichlorophenol | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 40 | -- | -- |
| 2,4-Dimethylphenol | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 100 | -- | -- |
| 2,4-Dinitrophenol | < 1.05 | < 1.04 | < 1.06 | < 1.08 | < 1.16 | < 1.08 | < 1.11 | < 1.08 | < 1.15 | < 1.06 | 3 | 50 | -- | -- |
| 2,4-Dinitrotoluene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 10 | -- | -- |
| 2,6-Dinitrotoluene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| 2-Chloronaphthalene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| 2-Chlorophenol | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 100 | -- | -- |
| 2-Methylnaphthalene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | 0.31 | < 0.29 | < 0.27 | 0.7 | 80 | -- | -- |
| 2-Methylphenol | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| 2-Nitrophenol | < 0.52 | < 0.52 | < 0.53 | < 0.54 | < 0.58 | < 0.54 | < 0.56 | < 0.54 | < 0.57 | < 0.53 | -- | -- | -- | -- |
| 3 & 4 Methylphenol | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| 3,3'-Dichlorobenzidine | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 3 | 20 | -- | -- |
| 4-Bromophenyl phenyl ether | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| 4-Nitrophenol | < 1.05 | < 1.04 | < 1.06 | < 1.08 | < 1.16 | < 1.08 | < 1.11 | < 1.08 | < 1.15 | < 1.06 | -- | -- | -- | -- |
| Acenaphthene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 4 | 3000 | -- | -- |
| Acenaphthylene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | 0.75 | < 0.29 | < 0.27 | 2 | 10 | -- | -- |
| Acetophenone | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| Aniline | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| Anthracene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 0.53 | < 0.27 | < 0.28 | 0.60 | < 0.29 | < 0.27 | 1000 | 3000 | -- | -- |
| Azobenzene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| Benzo(A)anthracene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 0.76 | < 0.27 | < 0.28 | 1.02 | 1.00 | 0.29 | 20 | 300 | -- | -- |
| Benzo(A)pyrene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 0.69 | < 0.27 | < 0.28 | 0.93 | 1.17 | 0.32 | 2 | 30 | -- | -- |
| Benzo(B)fluoranthene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 0.72 | < 0.27 | < 0.28 | 1.04 | 0.93 | 0.36 | 20 | 300 | -- | -- |
| Benzo(g,h,i)Perylene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 0.41 | < 0.27 | < 0.28 | 0.51 | 0.84 | < 0.27 | 1000 | 3000 | -- | -- |
| Benzo(K)fluoranthene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 0.29 | < 0.27 | < 0.28 | 0.41 | 0.85 | < 0.27 | 200 | 3000 | -- | -- |
| bis (2-chloroethoxy) Methane | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| bis (2-chloroethyl) Ether | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 0.7 | -- | -- |
| bis (2-chloroisopropyl) Ether | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 0.7 | -- | -- |
| Bis (2-ethylhexyl) phthalate | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 100 | 700 | -- | -- |
| Butylbenzylphthalate | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | 0.39 | < 0.27 | -- | -- | -- | -- |
| Chrysene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 0.72 | < 0.27 | < 0.28 | 1.02 | 0.93 | 0.32 | 200 | 3000 | -- | -- |
| Di-n-octyl phthalate | < 0.52 | < 0.52 | < 0.53 | < 0.54 | < 0.58 | < 0.54 | < 0.56 | < 0.54 | < 0.57 | < 0.53 | -- | -- | -- | -- |
| Dibenzo(A,H)anthracene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 2 | 30 | -- | -- |
| Dibenzofuran | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | 0.43 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| Diethyl phthalate | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 10 | 200 | -- | -- |
| Dimethyl phthalate | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 50 | -- | -- |
| Fluoranthene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 1.85 | < 0.27 | < 0.28 | 3.07 | 1.48 | 0.53 | 1000 | 3000 | -- | -- |
| Fluorene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | 0.59 | < 0.29 | < 0.27 | 1000 | 3000 | -- | -- |
| Hexachlorobenzene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 0.9 | -- | -- |
| Hexachlorobutadiene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 30 | 100 | -- | -- |
| Hexachloroethane | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 3 | -- | -- |
| Indeno (1,2,3-cd) pyrene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 0.40 | < 0.27 | < 0.28 | 0.55 | 0.92 | < 0.27 | 20 | 300 | -- | -- |
| Isophorone | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| N-dibutyl phthalate | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| n-Nitrosodimethylamine | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| Naphthalene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | 0.79 | < 0.29 | < 0.27 | 4 | 20 | -- | -- |
| Nitrobenzene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| P-chloroaniline | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 1 | 3 | -- | -- |
| P-dichlorobenzene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 1 | -- | -- |
| Pentachlorophenol | < 1.05 | < 1.04 | < 1.06 | < 1.08 | < 1.16 | < 1.08 | < 1.11 | < 1.08 | < 1.15 | < 1.06 | 3 | 10 | -- | -- |
| Phenanthrene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 1.97 | < 0.27 | < 0.28 | 3.23 | 0.56 | 0.27 | 10 | 1000 | -- | -- |
| Phenols | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.9 | 20 | -- | -- |
| Pyrene | < 0.26 | < 0.26 | 0.32 | < 0.27 | 1.51 | 0.27 | < 0.28 | 2.20 | 1.48 | 0.52 | 1000 | 3000 | -- | -- |
| Pyridine | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| **Total SVOCs** | 0 | 0 | 0.58 | 0 | 9.85 | 0.27 | 0 | 17.53 | 10.55 | 2.59 | -- | -- | 100 | 100 |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | |
| C9-C36 | < 10.8 | 19.1 | < 10.8 | < 11.6 | 19.8 | 146 D | < 10.5 | 53.2 | 72.3 D | 36.8 | -- | -- | -- | -- |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | C-3 | C-5 | C-7 | D-8.5 | DD-1 | DD-3 | DD-5 | DD-7 | E-1 | E-3 | | | | |
| Sample ID | C-3 | C-5 | C-7 | D-8.5 | DD-1 | DD-3 | DD-5 | DD-7 | E-1 | E-3 0-3 | | | | |
| Sample Depth (feet) | 0-4.8 | 0-5 | 0-4.3 | 0-4 | 0-5 | 0-5 | 0-4.5 | 0-3 | 0-5 | 0-3 | | | | |
| Sample Date | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 5/2/2024 | 5/3/2024 | | | | |
| Laboratory Sample ID | 24E0124-02 | 24E0124-03 | 24E0124-04 | 24E0124-05 | 24D1044-18 | 24E0026-03 | 24E0026-02 | 24E0026-01 | 24E0124-08 | 24E0124-16 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | |
| 2,2-Dichloropropionic acid | < 0.047 | < 0.047 | < 0.047 | < 0.049 | < 0.049 | < 0.048 | < 0.048 | < 0.048 | < 0.050 | < 0.047 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxyacetic acid | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxypropionic acid | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| 2,4-Dichlorophenoxyacetic acid | < 0.049 | < 0.049 | < 0.049 | < 0.051 | < 0.051 | < 0.05 | < 0.049 | < 0.050 | < 0.052 | < 0.048 | -- | -- | -- | -- |
| 2-(2-Methyl-1,4-chlorophenoxy) propionic acid | < 2.45 | < 2.44 | < 2.44 | < 2.54 | < 2.53 | < 2.49 | < 2.470 | < 2.490 | < 2.590 | < 2.410 | -- | -- | -- | -- |
| 4,4'-DDD | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 10 | 40 | -- | -- |
| 4,4'-DDE | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 7 | 30 | -- | -- |
| 4,4'-DDT | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 7 | 30 | -- | -- |
| 4-(2,4-dichlorophenoxy)-Butanoic acid | < 0.050 | < 0.049 | < 0.049 | < 0.051 | < 0.051 | < 0.050 | < 0.050 | < 0.050 | < 0.052 | < 0.049 | -- | -- | -- | -- |
| Aldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.5 | -- | -- |
| beta-BHC | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-delta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-gamma | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | 0.003 | 0.5 | -- | -- |
| Chlordane (mixture of isomers) | < 0.022 | < 0.022 | < 0.021 | < 0.022 | < 0.023 | < 0.021 | < 0.021 | < 0.022 | < 0.021 | < 0.021 | -- | -- | -- | -- |
| Chlordane, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Dicamba | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| chloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | < 0.049 | < 0.049 | < 0.049 | < 0.051 | < 0.051 | < 0.050 | < 0.049 | < 0.050 | < 0.052 | < 0.048 | -- | -- | -- | -- |
| Dieldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.6 | -- | -- |
| Dinoseb | < 0.050 | < 0.049 | < 0.049 | < 0.051 | < 0.051 | < 0.050 | < 0.050 | < 0.050 | < 0.052 | < 0.049 | -- | -- | -- | -- |
| Endosulfan sulfate | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, beta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 20 | 30 | -- | -- |
| Endrin ketone | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Heptachlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.3 | 2 | -- | -- |
| Heptachlor Epoxide | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.2 | 1 | -- | -- |
| Hexachlorobenzene | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.7 | 0.9 | -- | -- |
| Methoxychlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 300 | 400 | -- | -- |
| Methylchlorophenoxyacetic acid | < 2.420 | < 2.420 | < 2.420 | < 2.510 | < 2.500 | < 2.470 | < 2.450 | < 2.470 | < 2.560 | < 2.390 | -- | -- | -- | -- |
| Toxaphene | < 0.136 | < 0.135 | < 0.128 | < 0.136 | < 0.143 | < 0.128 | < 0.133 | < 0.136 | < 0.134 | < 0.134 | -- | -- | -- | -- |
| trans-Chlordane | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.0026 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.1 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1254 | 0.08 | 0.1 | < 0.05 | 0.1 | 0.6 | 0.09 | 0.08 | < 0.05 | 0.1 | 0.1 | -- | -- | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | | | | |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | -- | -- | -- | -- |
| **Total PCBs** | 0.08 | 0.1 | 0 | 0.1 | 0.7 | 0.09 | 0.08 | 0 | 0.1 | 0.1 | 1 | 4 | < 2 | < 2 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | |
| Arsenic | 4.05 | 2.96 | 1.71 | 1.77 | 7.09 | 2.35 | 1.31 | 2.86 | 6.72 | 5.39 | 20 | 20 | 40 | 40 |
| Barium | 14.1 | 15 | 9.04 | 22.1 | 37.8 | 15.2 | 5.93 | 8.73 | 216 | 31.9 | 1000 | 3000 | -- | -- |
| Cadmium | < 0.36 | < 0.39 | < 0.4 | < 0.43 | < 0.39 | < 0.37 | < 0.4 | < 0.39 | < 0.39 | < 0.36 | 80 | 80 | 80 | 30 |
| Chromium | 6.84 | 5.88 | 4.11 | 4.17 | 23.3 | 10.8 | 4.29 | 4.36 | 26.7 | 11.1 | 100 | 200 | 1000 | 1000 |
| Lead | 24.6 | 169 | 10.9 | 73.8 | 76.2 | 19.5 | 9.18 | 5.02 | 676 | 188 | 200 | 600 | 2000 | 1000 |
| Mercury | < 0.04 | 0.04 | < 0.04 | 0.09 | 0.08 | 0.06 | 0.04 | < 0.03 | 0.24 | 0.15 | 20 | 40 | 10 | 10 |
| Selenium | < 3.6 | < 3.93 | < 4.03 | < 4.29 | < 3.92 | < 3.68 | < 3.96 | < 3.85 | < 3.92 | < 3.64 | 400 | 800 | -- | -- |
| Silver | < 0.36 | < 0.39 | < 0.4 | < 0.43 | < 0.39 | < 0.37 | < 0.4 | < 0.39 | 0.53 | < 0.36 | 100 | 200 | -- | -- |
| **TCLP (mg/L)** | | | | | | | | | | | | | | |
| Lead TCLP (mg/L) | -- | 0.58 | -- | 0.54 | -- | -- | -- | -- | 2.63 | 0.17 | -- | -- | -- | -- |
| **General Chemistry** | | | | | | | | | | | | | | |
| Corrosivity (pH) | 7.75 | 7.68 | 7.46 | 7.11 | 6.62 | 8.06 | 8.95 | 7.95 | 8.5 | 7.96 | -- | -- | -- | -- |
| **Physical Conditions** | | | | | | | | | | | | | | |
| Flashpoint ($^{o}$F) | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | -- | -- | -- | -- |
| Reactivity - Cyanide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | -- | -- | -- | -- |
| Reactivity - Sulfide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | -- | -- | -- | -- |
| Specific Conductance @ 25$^{o}$C (µmhos/cm) | 59 | 186 | 36 | 35 | 30 | 57 | 59 | 72 | 145 | 124 | -- | -- | 8000 | 4000 |

Notes:
Laboratory analytical results compared to RCS-1, RCS-2,
VOCs = Volatile Organic Carbons; SVOCs = Semi-Volat
D = identified in an analysis that has been diluted
P = pesticide target analyte had a % difference > 25% bet
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceedance of MassDEP MCP RCS-1
Exceedance of MassDEP MCP RCS-1 & RCS-2
Exceedance of COMM-97 - Lined Landfill criteria
Exceedance of COMM-97 - Unlined Landfill criteria

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | E-3 | E-5 | E-7 | EE-0.5 | EE-8.5 | FF-1 | FF-3 | FF-5 | FF-7 | G-1 | | | | |
| Sample ID | E-3 3-7 | E-5 | E-7 | EE-0.5 | EE-8.5 | FF-1 | FF-3 | FF-5 | FF-7 | G-1 | | | | |
| Sample Depth (feet) | 3-7 | 0-4.3 | 0-4.5 | 0-3.5 | 0-4.5 | 0-5 | 0-4 | 0-4 | 0-3.5 | 0-5 | | | | |
| Sample Date | 5/3/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | | | | |
| Laboratory Sample ID | 24E0124-17 | 24E0124-07 | 24E0124-06 | 24D1044-14 | 24D1044-13 | 24D1044-12 | 24D1044-11 | 24D1044-10 | 24D1044-09 | 24E0124-11 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.1 | 0.1 | -- | -- |
| 1,1,1-Trichloroethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 30 | 600 | -- | -- |
| 1,1,2,2-Tetrachloroethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.005 | 0.02 | -- | -- |
| 1,1,2-Trichloroethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.1 | 2 | -- | -- |
| 1,1-Dichloroethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.4 | 9 | -- | -- |
| 1,1-Dichloroethylene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 3 | 40 | -- | -- |
| 1,1-Dichloropropene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| 1,2,3-Trichlorobenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| 1,2,3-Trichloropropane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 2 | 6 | -- | -- |
| 1,2-Dibromo-3-chloropropane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| 1,2-Dibromoethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichlorobenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 9 | 100 | -- | -- |
| 1,2-Dichloroethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichloropropane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.1 | 0.1 | -- | -- |
| 1,3,4-Trimethylbenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| 1,3,5-Trimethylbenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| 1,3-Dichlorobenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 3 | 200 | -- | -- |
| 1,3-Dichloropropane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| 1,4-Dioxane | < 0.116 | < 0.121 | < 0.135 | < 0.136 | < 0.096 | < 0.090 | < 0.090 | < 0.092 | < 0.095 | < 0.111 | 0.2 | 5 | -- | -- |
| 2,2-Dichloropropane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| 4-Isopropyltoluene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Acetone | < 0.058 | < 0.060 | < 0.068 | < 0.068 | < 0.048 | < 0.045 | < 0.045 | < 0.046 | < 0.047 | < 0.055 | 6 | 50 | -- | -- |
| Benzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 2 | 200 | -- | -- |
| Bromobenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Bromochloromethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Bromodichloromethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.1 | 0.1 | -- | -- |
| Bromoform | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.1 | 1 | -- | -- |
| Bromomethane | < 0.012 | < 0.012 | < 0.014 | < 0.014 | < 0.010 | < 0.009 | < 0.009 | < 0.009 | < 0.010 | < 0.011 | 0.5 | 0.5 | -- | -- |
| Carbon Disulfide | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Carbon Tetrachloride | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 5 | 5 | -- | -- |
| Chlorobenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 1 | 3 | -- | -- |
| Chlorodibromomethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.005 | 0.03 | -- | -- |
| Chloroethane | < 0.012 | < 0.012 | < 0.014 | < 0.014 | < 0.010 | < 0.009 | < 0.009 | < 0.009 | < 0.010 | < 0.011 | -- | -- | -- | -- |
| Chloroform | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.2 | 0.2 | -- | -- |
| Cis-1,2-dichloroethylene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.1 | 0.1 | -- | -- |
| cis-1,3-Dichloropropene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Dibromomethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Dichlorodifluoromethane | < 0.012 | < 0.012 | < 0.014 | < 0.014 | < 0.010 | < 0.009 | < 0.009 | < 0.009 | < 0.010 | < 0.011 | -- | -- | -- | -- |
| Dichloromethane | < 0.029 | < 0.030 | < 0.034 | < 0.034 | < 0.024 | < 0.023 | < 0.023 | < 0.023 | < 0.024 | < 0.028 | 0.1 | 3 | -- | -- |
| Diisopropyl Ether | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Ethyl benzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 40 | 1000 | -- | -- |
| Ethyl ether | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Ethyl tert-butyl ether | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Fluorotrichloromethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Hexachlorobutadiene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 30 | 100 | -- | -- |
| Hexachloroethane | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.7 | 3 | -- | -- |
| Isopropyl benzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| m,p-Xylenes | < 0.012 | < 0.012 | < 0.014 | < 0.014 | < 0.010 | < 0.009 | < 0.009 | < 0.009 | < 0.010 | < 0.011 | -- | -- | -- | -- |
| Methyl Chloride | < 0.012 | < 0.012 | < 0.014 | < 0.014 | < 0.010 | < 0.009 | < 0.009 | < 0.009 | < 0.010 | < 0.011 | -- | -- | -- | -- |
| Methyl ethyl ketone | < 0.058 | < 0.060 | < 0.068 | < 0.068 | < 0.048 | < 0.045 | < 0.0452 | < 0.046 | < 0.047 | < 0.055 | 4 | 50 | -- | -- |
| Methyl isobutyl ketone | < 0.058 | < 0.060 | < 0.068 | < 0.068 | < 0.048 | < 0.045 | < 0.0452 | < 0.046 | < 0.047 | < 0.055 | 0.4 | 50 | -- | -- |
| Methyl n-butyl ketone | < 0.058 | < 0.060 | < 0.068 | < 0.068 | < 0.048 | < 0.045 | < 0.0452 | < 0.046 | < 0.047 | < 0.055 | -- | -- | -- | -- |
| Methyl-tert-butyl ether | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | 0.1 | 100 | -- | -- |
| n-Butylbenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| n-Propylbenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Naphthalene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | 4 | 20 | -- | -- |
| O-chlorotoluene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| o-Xylenes | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| p-Chlorotoluene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| P-dichlorobenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | 0.7 | 1 | -- | -- |
| sec-Butylbenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Styrene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | 3 | 4 | -- | -- |
| Tert-amyl-methyl ether | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| tert-Butylbenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Tetrachloroethylene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | 1 | 4 | -- | -- |
| Tetrahydrofuran | < 0.023 | < 0.024 | < 0.027 | < 0.027 | < 0.019 | < 0.018 | < 0.0181 | < 0.018 | < 0.019 | < 0.022 | -- | -- | -- | -- |
| Toluene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | 30 | 1000 | -- | -- |
| Trans-1,2-dichloroethylene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | 1 | 1 | -- | -- |
| trans-1,3-Dichloropropene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Trichloroethylene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | 0.3 | 0.3 | -- | -- |
| Vinyl Chloride | < 0.012 | < 0.012 | < 0.014 | < 0.014 | < 0.010 | < 0.009 | < 0.009 | < 0.009 | < 0.010 | < 0.011 | 0.3 | 0.7 | -- | -- |
| Xylene | < 0.012 | < 0.012 | < 0.014 | < 0.014 | < 0.010 | < 0.009 | < 0.009 | < 0.009 | < 0.010 | < 0.011 | 100 | 100 | -- | -- |
| Total VOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -- | -- | 10 | 4 |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | E-3 | E-5 | E-7 | EE-0.5 | EE-8.5 | FF-1 | FF-3 | FF-5 | FF-7 | G-1 | | | | |
| Sample ID | E-3 3-7 | E-5 | E-7 | EE-0.5 | EE-8.5 | FF-1 | FF-3 | FF-5 | FF-7 | G-1 | | | | |
| Sample Depth (feet) | 3-7 | 0-4.3 | 0-4.5 | 0-3.5 | 0-4.5 | 0-5 | 0-4 | 0-4 | 0-3.5 | 0-5 | | | | |
| Sample Date | 5/3/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| Laboratory Sample ID | 24E0124-17 | 24E0124-07 | 24E0124-06 | 24D1044-14 | 24D1044-13 | 24D1044-12 | 24D1044-11 | 24D1044-10 | 24D1044-09 | 24E0124-11 | | | | |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 0.05 | 6 | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 2 | 6 | -- | -- |
| 1,2-Dichlorobenzene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 9 | 100 | -- | -- |
| 1,3-Dichlorobenzene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 3 | 200 | -- | -- |
| 2,4,5-Trichlorophenol | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 4 | 600 | -- | -- |
| 2,4,6-Trichlorophenol | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 20 | -- | -- |
| 2,4-Dichlorophenol | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 40 | -- | -- |
| 2,4-Dimethylphenol | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 100 | -- | -- |
| 2,4-Dinitrophenol | < 1.00 | < 1.13 | < 1.19 | < 1.17 | < 1.14 | < 1.09 | < 1.07 | < 1.08 | < 1.14 | < 1.13 | 3 | 50 | -- | -- |
| 2,4-Dinitrotoluene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 10 | -- | -- |
| 2,6-Dinitrotoluene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 2-Chloronaphthalene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 2-Chlorophenol | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 100 | -- | -- |
| 2-Methylnaphthalene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 80 | -- | -- |
| 2-Methylphenol | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 2-Nitrophenol | < 0.50 | < 0.57 | < 0.60 | < 0.58 | < 0.57 | < 0.54 | < 0.54 | < 0.54 | < 0.57 | < 0.56 | -- | -- | -- | -- |
| 3 & 4 Methylphenol | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 3,3'-Dichlorobenzidine | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 3 | 20 | -- | -- |
| 4-Bromophenyl phenyl ether | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 4-Nitrophenol | < 1.00 | < 1.13 | < 1.19 | < 1.17 | < 1.14 | < 1.09 | < 1.07 | < 1.08 | < 1.14 | < 1.13 | -- | -- | -- | -- |
| Acenaphthene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 4 | 3000 | -- | -- |
| Acenaphthylene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 2 | 10 | -- | -- |
| Acetophenone | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Aniline | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Anthracene | < 0.25 | 0.44 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 1000 | 3000 | -- | -- |
| Azobenzene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Benzo(A)anthracene | 0.33 | 1.29 | < 0.30 | < 0.29 | < 0.29 | 0.42 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 20 | 300 | -- | -- |
| Benzo(A)pyrene | 0.36 | 1.21 | < 0.30 | < 0.29 | < 0.29 | 0.42 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 2 | 30 | -- | -- |
| Benzo(B)fluoranthene | 0.37 | 0.92 | < 0.30 | < 0.29 | < 0.29 | 0.44 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 20 | 300 | -- | -- |
| Benzo(g,h,i)Perylene | < 0.25 | 0.75 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 1000 | 3000 | -- | -- |
| Benzo(K)fluoranthene | < 0.25 | 0.90 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 200 | 3000 | -- | -- |
| bis (2-chloroethoxy) Methane | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| bis (2-chloroethyl) Ether | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 0.7 | -- | -- |
| bis (2-chloroisopropyl) Ether | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 0.7 | -- | -- |
| Bis (2-ethylhexyl) phthalate | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 100 | 700 | -- | -- |
| Butylbenzylphthalate | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Chrysene | 0.32 | 1.20 | < 0.30 | < 0.29 | < 0.29 | 0.41 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 200 | 3000 | -- | -- |
| Di-n-octyl phthalate | < 0.50 | < 0.57 | < 0.60 | < 0.58 | < 0.57 | < 0.54 | < 0.54 | < 0.54 | < 0.57 | < 0.56 | -- | -- | -- | -- |
| Dibenzo(A,H)anthracene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 2 | 30 | -- | -- |
| Dibenzofuran | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Diethyl phthalate | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 10 | 200 | -- | -- |
| Dimethyl phthalate | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 50 | -- | -- |
| Fluoranthene | 0.51 | 2.28 | < 0.30 | < 0.29 | < 0.29 | 0.88 | < 0.27 | < 0.27 | < 0.29 | 0.31 | 1000 | 3000 | -- | -- |
| Fluorene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 1000 | 3000 | -- | -- |
| Hexachlorobenzene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 0.9 | -- | -- |
| Hexachlorobutadiene | < 0.25 | < 0.283 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 30 | 100 | -- | -- |
| Hexachloroethane | < 0.25 | < 0.283 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 3 | -- | -- |
| Indeno (1,2,3-cd) pyrene | < 0.25 | 0.80 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 20 | 300 | -- | -- |
| Isophorone | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| N-dibutyl phthalate | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| n-Nitrosodimethylamine | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Naphthalene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 4 | 20 | -- | -- |
| Nitrobenzene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| P-chloroaniline | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 1 | 3 | -- | -- |
| P-dichlorobenzene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 1 | -- | -- |
| Pentachlorophenol | < 1.00 | < 1.13 | < 1.19 | < 1.17 | < 1.14 | < 1.09 | < 1.07 | < 1.08 | < 1.14 | < 1.13 | 3 | 10 | -- | -- |
| Phenanthrene | < 0.25 | 1.78 | < 0.30 | < 0.29 | < 0.29 | 0.45 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 10 | 1000 | -- | -- |
| Phenols | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.9 | 20 | -- | -- |
| Pyrene | 0.60 | 2.54 | < 0.30 | < 0.29 | < 0.29 | 0.76 | < 0.27 | < 0.27 | < 0.29 | 0.29 | 1000 | 3000 | -- | -- |
| Pyridine | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| **Total SVOCs** | 2.47 | 14.10 | 0 | 0 | 0 | 3.77 | 0 | 0 | 0 | 0.60 | -- | -- | 100 | 100 |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | |
| C9-C36 | 20.6 | 70.3 | 19.60 | 72.80 D | < 11.10 | 42.00 | < 11.40 | < 10.50 | 16.20 | 27.50 | -- | -- | -- | -- |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | E-3 | E-5 | E-7 | EE-0.5 | EE-8.5 | FF-1 | FF-3 | FF-5 | FF-7 | G-1 | | | | |
| Sample ID | E-3 3-7 | E-5 | E-7 | EE-0.5 | EE-8.5 | FF-1 | FF-3 | FF-5 | FF-7 | G-1 | | | | |
| Sample Depth (feet) | 3-7 | 0-4.3 | 0-4.5 | 0-3.5 | 0-4.5 | 0-5 | 0-4 | 0-4 | 0-3.5 | 0-5 | | | | |
| Sample Date | 5/3/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | | | | |
| Laboratory Sample ID | 24E0124-17 | 24E0124-07 | 24E0124-06 | 24D1044-14 | 24D1044-13 | 24D1044-12 | 24D1044-11 | 24D1044-10 | 24D1044-09 | 24E0124-11 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | |
| 2,2-Dichloropropionic acid | < 0.047 | < 0.048 | < 0.054 | < 0.049 | < 0.049 | < 0.048 | < 0.047 | < 0.049 | < 0.051 | < 0.049 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxyacetic acid | < 0.010 | < 0.010 | < 0.011 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.010 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxypropionic acid | < 0.010 | < 0.010 | < 0.011 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.010 | -- | -- | -- | -- |
| 2,4-Dichlorophenoxyacetic acid | < 0.048 | < 0.050 | < 0.056 | < 0.051 | < 0.050 | < 0.050 | < 0.049 | < 0.051 | < 0.053 | < 0.051 | -- | -- | -- | -- |
| 2-(2-Methyl-1,4-chlorophenoxy) propionic acid | < 2.410 | < 2.480 | < 2.810 | < 2.540 | < 2.520 | < 2.500 | < 2.430 | < 2.540 | < 2.660 | < 2.530 | -- | -- | -- | -- |
| 4,4'-DDD | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 10 | 40 | -- | -- |
| 4,4'-DDE | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 7 | 30 | -- | -- |
| 4,4'-DDT | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 7 | 30 | -- | -- |
| 4-(2,4-dichlorophenoxy)-Butanoic acid | < 0.049 | < 0.050 | < 0.057 | < 0.051 | < 0.051 | < 0.051 | < 0.049 | < 0.051 | < 0.054 | < 0.051 | -- | -- | -- | -- |
| Aldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.5 | -- | -- |
| beta-BHC | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-delta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-gamma | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | 0.003 | 0.5 | -- | -- |
| Chlordane (mixture of isomers) | < 0.021 | < 0.022 | < 0.023 | < 0.022 | < 0.022 | < 0.021 | < 0.022 | < 0.022 | < 0.023 | < 0.023 | -- | -- | -- | -- |
| Chlordane, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Dicamba | < 0.010 | < 0.010 | < 0.011 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.010 | -- | -- | -- | -- |
| chloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | < 0.048 | < 0.050 | < 0.056 | < 0.051 | < 0.050 | < 0.050 | < 0.049 | < 0.051 | < 0.053 | < 0.051 | -- | -- | -- | -- |
| Dieldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.025 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.6 | -- | -- |
| Dinoseb | < 0.049 | < 0.050 | < 0.057 | < 0.051 | < 0.051 | < 0.051 | < 0.049 | < 0.051 | < 0.054 | < 0.051 | -- | -- | -- | -- |
| Endosulfan sulfate | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, beta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.006 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 20 | 30 | -- | -- |
| Endrin ketone | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Heptachlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.3 | 2 | -- | -- |
| Heptachlor Epoxide | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.2 | 1 | -- | -- |
| Hexachlorobenzene | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.7 | 0.9 | -- | -- |
| Methoxychlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 300 | 400 | -- | -- |
| Methylchlorophenoxyacetic acid | < 2.380 | < 2.450 | < 2.780 | < 2.510 | < 2.490 | < 2.480 | < 2.400 | < 2.510 | < 2.630 | < 2.500 | -- | -- | -- | -- |
| Toxaphene | < 0.129 | < 0.139 | < 0.146 | < 0.138 | < 0.136 | < 0.134 | < 0.140 | < 0.136 | < 0.146 | < 0.145 | -- | -- | -- | -- |
| trans-Chlordane | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | 0.1 | < 0.05 | < 0.05 | < 0.05 | 0.08 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1254 | 0.2 | 0.09 | < 0.06 | 0.08 | 0.2 | 2.3 D | < 0.05 | < 0.05 | 0.07 | 0.2 | -- | -- | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.1 | | | | |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | -- | -- | -- | -- |
| **Total PCBs** | 0.2 | 0.09 | 0 | 0.08 | 0.3 | 2.33 | 0 | 0 | 0.15 | 0.2 | 1 | 4 | < 2 | < 2 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | |
| Arsenic | 2.99 | 8.09 | 6.38 | 4.39 | 6.02 | 1.47 | 4.08 | 3.12 | 4.41 | 4.4 | 20 | 20 | 40 | 40 |
| Barium | 14.9 | 104 | 58 | 28.6 | 66.6 | 16.6 | 16.4 | 16.4 | 20.7 | 50 | 1000 | 3000 | -- | -- |
| Cadmium | < 0.39 | < 0.38 | < 0.44 | < 0.41 | < 0.37 | < 0.38 | < 0.42 | < 0.4 | < 0.43 | < 0.42 | 80 | 80 | 80 | 30 |
| Chromium | 5.89 | 12.5 | 11.8 | 10.7 | 12 | 5.23 | 9.93 | 7.16 | 9.44 | 12.3 | 100 | 200 | 1000 | 1000 |
| Lead | 53.5 | 368 | 171 | 37.6 | 134 | 22.1 | 13.9 | 6.21 | 61.3 | 441 | 200 | 600 | 2000 | 1000 |
| Mercury | 0.36 | 0.99 D | 0.33 | < 0.03 | 0.14 | 0.13 | < 0.04 | < 0.03 | 0.05 | 0.14 | 20 | 40 | 10 | 10 |
| Selenium | < 3.87 | < 3.84 | < 4.4 | < 4.13 | < 3.73 | < 3.78 | < 4.17 | < 3.98 | < 4.27 | < 4.16 | 400 | 800 | -- | -- |
| Silver | < 0.39 | < 0.38 | < 0.44 | < 0.41 | < 0.37 | < 0.38 | < 0.42 | < 0.4 | < 0.43 | < 0.42 | 100 | 200 | -- | -- |
| **TCLP (mg/L)** | | | | | | | | | | | | | | |
| Lead TCLP (mg/L) | -- | 1.38 | 0.4 | -- | 0.71 | -- | -- | -- | -- | 3.25 | -- | -- | -- | -- |
| **General Chemistry** | | | | | | | | | | | | | | |
| Corrosivity (pH) | 8.7 | 8.57 | 7.76 | 6.45 | 8.15 | 7.1 | 8.19 | 6.48 | 6.67 | 8.45 | -- | -- | -- | -- |
| **Physical Conditions** | | | | | | | | | | | | | | |
| Flashpoint (°F) | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | -- | -- | -- | -- |
| Reactivity - Cyanide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | -- | -- | -- | -- |
| Reactivity - Sulfide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | -- | -- | -- | -- |
| Specific Conductance @ 25°C (µmhos/cm) | 206 | 213 | 129 | 53 | 136 | 46 | 119 | 9 | 56 | 202 | -- | -- | 8000 | 4000 |

Notes:
Laboratory analytical results compared to RCS-1, RCS-2,
VOCs = Volatile Organic Carbons; SVOCs = Semi-Volat
D = identified in an analysis that has been diluted
P = pesticide target analyte had a % difference > 25% bet
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceedance of MassDEP MCP RCS-1
Exceedance of MassDEP MCP RCS-1 & RCS-2
Exceedance of COMM-97 - Lined Landfill criteria
Exceedance of COMM-97 - Unlined Landfill criteria

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | G-3 | G-3 | G-5 | G-7 | H-8.5 | HH-1 | HH-3 | HH-5 | HH-7 | I-1 | | | | |
| Sample ID | G-3 0-4 | G-3 4-8 | G-5 | G-7 | H-8.5 | HH-1 | HH-3 | HH-5 | HH-7 | I-1 | | | | |
| Sample Depth (feet) | 0-4 | 4-8 | 0-5 | 0-4.5 | 0-4.5 | 0-4 | 0-5 | 0-4 | 0-4 | 0-4 | | | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/30/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | | | | |
| Laboratory Sample ID | 24E0050-06 | 24E0050-07 | 24E0124-10 | 24E0124-09 | 24E0124-12 | 24D1044-08 | 24E0026-04 | 24D1044-06 | 24D1044-05 | 24E0124-15 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,1,1-Trichloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 30 | 600 | -- | -- |
| 1,1,2,2-Tetrachloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.005 | 0.02 | -- | -- |
| 1,1,2-Trichloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.1 | 2 | -- | -- |
| 1,1-Dichloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.4 | 9 | -- | -- |
| 1,1-Dichloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 3 | 40 | -- | -- |
| 1,1-Dichloropropene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| 1,2,3-Trichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| 1,2,3-Trichloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 2 | 6 | -- | -- |
| 1,2-Dibromo-3-chloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| 1,2-Dibromoethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 9 | 100 | -- | -- |
| 1,2-Dichloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,3,4-Trimethylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| 1,3,5-Trimethylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| 1,3-Dichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 3 | 200 | -- | -- |
| 1,3-Dichloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| 1,4-Dioxane | < 0.097 | < 0.102 | < 0.101 | < 0.110 | < 0.107 | < 0.087 | < 0.093 | < 0.086 | < 0.125 | < 0.094 | 0.2 | 5 | -- | -- |
| 2,2-Dichloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| 4-Isopropyltoluene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Acetone | < 0.049 | < 0.051 | < 0.050 | < 0.055 | < 0.054 | < 0.044 | < 0.046 | < 0.043 | < 0.063 | < 0.047 | 6 | 50 | -- | -- |
| Benzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 2 | 200 | -- | -- |
| Bromobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Bromochloromethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Bromodichloromethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.1 | 0.1 | -- | -- |
| Bromoform | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.1 | 1 | -- | -- |
| Bromomethane | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.011 | < 0.009 | < 0.009 | < 0.009 | < 0.013 | < 0.009 | 0.5 | 0.5 | -- | -- |
| Carbon Disulfide | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Carbon Tetrachloride | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 5 | 5 | -- | -- |
| Chlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 1 | 3 | -- | -- |
| Chlorodibromomethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.005 | 0.03 | -- | -- |
| Chloroethane | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.011 | < 0.009 | < 0.009 | < 0.009 | < 0.013 | < 0.009 | -- | -- | -- | -- |
| Chloroform | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.2 | 0.2 | -- | -- |
| Cis-1,2-dichloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.1 | 0.1 | -- | -- |
| cis-1,3-Dichloropropene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Dibromomethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Dichlorodifluoromethane | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.011 | < 0.009 | < 0.009 | < 0.009 | < 0.013 | < 0.009 | -- | -- | -- | -- |
| Dichloromethane | < 0.024 | < 0.026 | < 0.025 | < 0.028 | < 0.027 | < 0.022 | < 0.023 | < 0.021 | < 0.031 | < 0.024 | 0.1 | 3 | -- | -- |
| Diisopropyl Ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Ethyl benzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 40 | 1000 | -- | -- |
| Ethyl ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Ethyl tert-butyl ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Fluorotrichloromethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Hexachlorobutadiene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 30 | 100 | -- | -- |
| Hexachloroethane | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.7 | 3 | -- | -- |
| Isopropyl benzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| m,p-Xylenes | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.011 | < 0.009 | < 0.009 | < 0.009 | < 0.013 | < 0.009 | -- | -- | -- | -- |
| Methyl Chloride | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.011 | < 0.009 | < 0.009 | < 0.009 | < 0.013 | < 0.009 | -- | -- | -- | -- |
| Methyl ethyl ketone | < 0.049 | < 0.051 | < 0.050 | < 0.055 | < 0.054 | < 0.044 | < 0.046 | < 0.043 | < 0.063 | < 0.047 | 4 | 50 | -- | -- |
| Methyl isobutyl ketone | < 0.049 | < 0.051 | < 0.050 | < 0.055 | < 0.054 | < 0.044 | < 0.046 | < 0.043 | < 0.063 | < 0.047 | 0.4 | 50 | -- | -- |
| Methyl n-butyl ketone | < 0.049 | < 0.051 | < 0.050 | < 0.055 | < 0.054 | < 0.044 | < 0.046 | < 0.043 | < 0.063 | < 0.047 | -- | -- | -- | -- |
| Methyl-tert-butyl ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.1 | 100 | -- | -- |
| n-Butylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| n-Propylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Naphthalene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | 0.013 | < 0.004 | < 0.006 | < 0.005 | 4 | 20 | -- | -- |
| O-chlorotoluene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| o-Xylenes | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| p-Chlorotoluene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| P-dichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.7 | 1 | -- | -- |
| sec-Butylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Styrene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 3 | 4 | -- | -- |
| Tert-amyl-methyl ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| tert-Butylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Tetrachloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 1 | 4 | -- | -- |
| Tetrahydrofuran | < 0.019 | < 0.020 | < 0.020 | < 0.022 | < 0.021 | < 0.018 | < 0.019 | < 0.017 | < 0.025 | < 0.019 | -- | -- | -- | -- |
| Toluene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 30 | 1000 | -- | -- |
| Trans-1,2-dichloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 1 | 1 | -- | -- |
| trans-1,3-Dichloropropene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Trichloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.3 | 0.3 | -- | -- |
| Vinyl Chloride | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.011 | < 0.009 | < 0.009 | < 0.009 | < 0.013 | < 0.009 | 0.3 | 0.7 | -- | -- |
| Xylene | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.011 | < 0.009 | < 0.009 | < 0.009 | < 0.013 | < 0.009 | 100 | 100 | -- | -- |
| Total VOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0.013 | 0 | 0 | 0 | -- | -- | 10 | 4 |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | G-3 | G-3 | G-5 | G-7 | H-8.5 | HH-1 | HH-3 | HH-5 | HH-7 | I-1 | | | | |
| Sample ID | G-3 0-4 | G-3 4-8 | G-5 | G-7 | H-8.5 | HH-1 | HH-3 | HH-5 | HH-7 | I-1 | | | | |
| Sample Depth (feet) | 0-4 | 4-8 | 0-5 | 0-4.5 | 0-4.5 | 0-4 | 0-5 | 0-4 | 0-4 | 0-4 | | | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/30/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | | | | |
| Laboratory Sample ID | 24E0050-06 | 24E0050-07 | 24E0124-10 | 24E0124-09 | 24E0124-12 | 24D1044-08 | 24E0026-04 | 24D1044-06 | 24D1044-05 | 24E0124-15 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 0.04 | < 0.03 | < 0.03 | < 0.03 | 0.05 | 6 | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 2 | 6 | -- | -- |
| 1,2-Dichlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 9 | 100 | -- | -- |
| 1,3-Dichlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 3 | 200 | -- | -- |
| 2,4,5-Trichlorophenol | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 4 | 600 | -- | -- |
| 2,4,6-Trichlorophenol | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 20 | -- | -- |
| 2,4-Dichlorophenol | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 40 | -- | -- |
| 2,4-Dimethylphenol | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 100 | -- | -- |
| 2,4-Dinitrophenol | < 1.09 | < 1.12 | < 1.08 | < 1.11 | < 1.03 | < 1.11 | < 1.09 | < 1.11 | < 1.14 | < 1.11 | 3 | 50 | -- | -- |
| 2,4-Dinitrotoluene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 10 | -- | -- |
| 2,6-Dinitrotoluene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 2-Chloronaphthalene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 2-Chlorophenol | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 100 | -- | -- |
| 2-Methylnaphthalene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 80 | -- | -- |
| 2-Methylphenol | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 2-Nitrophenol | < 0.55 | < 0.56 | < 0.54 | < 0.55 | < 0.51 | < 0.56 | < 0.55 | < 0.55 | < 0.57 | < 0.56 | -- | -- | -- | -- |
| 3 & 4 Methylphenol | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 3,3'-Dichlorobenzidine | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 3 | 20 | -- | -- |
| 4-Bromophenyl phenyl ether | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 4-Nitrophenol | < 1.09 | < 1.12 | < 1.08 | < 1.11 | < 1.03 | < 1.11 | < 1.09 | < 1.11 | < 1.14 | < 1.11 | -- | -- | -- | -- |
| Acenaphthene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 4 | 3000 | -- | -- |
| Acenaphthylene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 2 | 10 | -- | -- |
| Acetophenone | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Aniline | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Anthracene | < 0.27 | 0.40 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | 0.47 | < 0.28 | < 0.29 | < 0.28 | 1000 | 3000 | -- | -- |
| Azobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Benzo(A)anthracene | < 0.27 | 0.78 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | 0.48 | < 0.28 | < 0.29 | 0.38 | 20 | 300 | -- | -- |
| Benzo(A)pyrene | < 0.27 | 0.80 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | 0.40 | < 0.28 | < 0.29 | 0.40 | 2 | 30 | -- | -- |
| Benzo(B)fluoranthene | < 0.27 | 0.55 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | 0.41 | < 0.28 | < 0.29 | 0.46 | 20 | 300 | -- | -- |
| Benzo(g,h,i)Perylene | < 0.27 | 0.52 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 1000 | 3000 | -- | -- |
| Benzo(K)fluoranthene | < 0.27 | 0.47 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 200 | 3000 | -- | -- |
| bis (2-chloroethoxy) Methane | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| bis (2-chloroethyl) Ether | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 0.7 | -- | -- |
| bis (2-chloroisopropyl) Ether | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 0.7 | -- | -- |
| Bis (2-ethylhexyl) phthalate | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | 0.53 | < 0.28 | 100 | 700 | -- | -- |
| Butylbenzylphthalate | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | 1.32 | < 0.28 | -- | -- | -- | -- |
| Chrysene | < 0.27 | 0.77 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | 0.42 | < 0.28 | < 0.29 | 0.43 | 200 | 3000 | -- | -- |
| Di-n-octyl phthalate | < 0.55 | < 0.56 | < 0.54 | < 0.55 | < 0.51 | < 0.56 | < 0.55 | < 0.55 | 1.03 | < 0.56 | -- | -- | -- | -- |
| Dibenzo(A,H)anthracene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 2 | 30 | -- | -- |
| Dibenzofuran | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Diethyl phthalate | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 10 | 200 | -- | -- |
| Dimethyl phthalate | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 50 | -- | -- |
| Fluoranthene | 0.58 | 1.39 | 0.35 | 0.28 | < 0.26 | 0.39 | 1.28 | < 0.28 | < 0.29 | 0.73 | 1000 | 3000 | -- | -- |
| Fluorene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 1000 | 3000 | -- | -- |
| Hexachlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 0.9 | -- | -- |
| Hexachlorobutadiene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 30 | 100 | -- | -- |
| Hexachloroethane | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 3 | -- | -- |
| Indeno (1,2,3-cd) pyrene | < 0.27 | 0.48 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 20 | 300 | -- | -- |
| Isophorone | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| N-dibutyl phthalate | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| n-Nitrosodimethylamine | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Naphthalene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | 0.35 | < 0.28 | < 0.29 | < 0.28 | 4 | 20 | -- | -- |
| Nitrobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| P-chloroaniline | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 1 | 3 | -- | -- |
| P-dichlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 1 | -- | -- |
| Pentachlorophenol | < 1.09 | < 1.12 | < 1.08 | < 1.11 | < 1.03 | < 1.11 | < 1.09 | < 1.11 | < 1.14 | < 1.11 | 3 | 10 | -- | -- |
| Phenanthrene | 0.56 | 1.51 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | 1.56 | < 0.28 | < 0.29 | 0.38 | 10 | 1000 | -- | -- |
| Phenols | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.9 | 20 | -- | -- |
| Pyrene | 0.56 | 1.67 | 0.44 | 0.37 | < 0.26 | 0.33 | 0.97 | < 0.28 | < 0.29 | 0.69 | 1000 | 3000 | -- | -- |
| Pyridine | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| **Total SVOCs** | 1.70 | 9.38 | 0.78 | 0.64 | 0 | 0.71 | 6.37 | 0 | 2.88 | 3.48 | -- | -- | 100 | 100 |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | |
| C9-C36 | 19.60 | 44.70 | 20.70 | 63.40 | 17.90 | 298 | < 11.20 | < 10.60 | 15.50 | 28.10 | -- | -- | -- | -- |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | G-3 | G-3 | G-5 | G-7 | H-8.5 | HH-1 | HH-3 | HH-5 | HH-7 | I-1 | | | | |
| Sample ID | G-3 0-4 | G-3 4-8 | G-5 | G-7 | H-8.5 | HH-1 | HH-3 | HH-5 | HH-7 | I-1 | | | | |
| Sample Depth (feet) | 0-4 | 4-8 | 0-5 | 0-4.5 | 0-4.5 | 0-4 | 0-5 | 0-4 | 0-4 | 0-4 | | | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/30/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | | | | |
| Laboratory Sample ID | 24E0050-06 | 24E0050-07 | 24E0124-10 | 24E0124-09 | 24E0124-12 | 24D1044-08 | 24E0026-04 | 24D1044-06 | 24D1044-05 | 24E0124-15 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | |
| 2,2-Dichloropropionic acid | < 0.047 | < 0.051 | < 0.049 | < 0.049 | < 0.047 | < 0.048 | < 0.048 | < 0.049 | < 0.049 | < 0.048 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxyacetic acid | < 0.010 | < 0.011 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxypropionic acid | < 0.010 | < 0.011 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| 2,4-Dichlorophenoxyacetic acid | < 0.049 | < 0.053 | < 0.051 | < 0.051 | < 0.049 | < 0.049 | < 0.049 | < 0.051 | < 0.051 | < 0.050 | -- | -- | -- | -- |
| 2-(2-Methyl-1,4-chlorophenoxy) propionic acid | < 2.430 | 2.640 | < 2.530 | < 2.540 | < 2.450 | < 2.460 | < 2.470 | < 2.540 | < 2.530 | < 2.490 | -- | -- | -- | -- |
| 4,4'-DDD | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 10 | 40 | -- | -- |
| 4,4'-DDE | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 7 | 30 | -- | -- |
| 4,4'-DDT | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.008 | 7 | 30 | -- | -- |
| 4-(2,4-dichlorophenoxy)-Butanoic acid | < 0.049 | < 0.053 | < 0.051 | < 0.051 | < 0.049 | < 0.050 | < 0.050 | < 0.051 | < 0.051 | < 0.050 | -- | -- | -- | -- |
| Aldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.5 | -- | -- |
| beta-BHC | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-delta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-gamma | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | 0.003 | 0.5 | -- | -- |
| Chlordane (mixture of isomers) | < 0.022 | < 0.023 | < 0.021 | < 0.023 | < 0.022 | < 0.022 | < 0.023 | < 0.022 | < 0.022 | < 0.023 | -- | -- | -- | -- |
| Chlordane, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Dicamba | < 0.010 | < 0.011 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| chloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | < 0.049 | < 0.053 | < 0.051 | < 0.051 | < 0.049 | < 0.049 | < 0.049 | < 0.051 | < 0.051 | < 0.050 | -- | -- | -- | -- |
| Dieldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.6 | -- | -- |
| Dinoseb | < 0.049 | < 0.053 | < 0.051 | < 0.051 | < 0.049 | < 0.050 | < 0.050 | < 0.051 | < 0.051 | < 0.050 | -- | -- | -- | -- |
| Endosulfan sulfate | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, beta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.004 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 20 | 30 | -- | -- |
| Endrin ketone | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Heptachlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.3 | 2 | -- | -- |
| Heptachlor Epoxide | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.2 | 1 | -- | -- |
| Hexachlorobenzene | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.7 | 0.9 | -- | -- |
| Methoxychlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 300 | 400 | -- | -- |
| Methylchlorophenoxyacetic acid | < 2.410 | < 2.610 | < 2.500 | < 2.510 | < 2.420 | < 2.440 | < 2.450 | < 2.510 | < 2.510 | < 2.460 | -- | -- | -- | -- |
| Toxaphene | < 0.140 | < 0.146 | < 0.133 | < 0.143 | < 0.137 | < 0.137 | < 0.141 | < 0.139 | < 0.134 | < 0.146 | -- | -- | -- | -- |
| trans-Chlordane | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1248 | < 0.05 | 0.1 | < 0.05 | 0.2 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | 0.07 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1254 | < 0.05 | 0.1 | 0.1 | 0.2 | 0.1 | 0.5 | 0.2 | < 0.06 | 0.09 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | | | | |
| PCB Aroclor 1262 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| **Total PCBs** | 0 | 0.2 | 0.1 | 0.4 | 0.1 | 0.5 | 0.2 | 0 | 0.16 | 0 | 1 | 4 | < 2 | < 2 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | |
| Arsenic | 4.93 | 4.95 | 3.38 | < 0.86 | 2.79 | 4.83 | 2.67 | 1.8 | 3.24 | 6.3 | 20 | 20 | 40 | 40 |
| Barium | 21.5 | 24.9 | 18.1 | < 0.86 | 21.6 | 21.9 | 12.9 | 8.93 | 19.4 | 44.7 | 1000 | 3000 | -- | -- |
| Cadmium | < 0.37 | < 0.42 | < 0.36 | < 0.43 | < 0.4 | < 0.38 | < 0.4 | < 0.41 | < 0.42 | < 0.41 | 80 | 80 | 80 | 30 |
| Chromium | 10.2 | 13 | 6.3 | < 0.86 | 10.1 | 7.16 | 4.97 | 3.9 | 5.41 | 15.4 | 100 | 200 | 1000 | 1000 |
| Lead | 24.2 | 59.7 | 51.1 | < 4.3 | 17.6 | 86.2 | 18.8 | < 4.12 | 53.6 | 107 | 200 | 600 | 2000 | 1000 |
| Mercury | < 0.03 | 0.05 | 0.18 | 0.13 | 0.07 | 0.05 | < 0.03 | < 0.03 | 0.13 | 0.26 | 20 | 40 | 10 | 10 |
| Selenium | < 3.75 | < 4.16 | < 3.65 | < 4.3 | < 4 | < 3.84 | < 4.05 | < 4.12 | < 4.23 | < 4.12 | 400 | 800 | -- | -- |
| Silver | < 0.37 | < 0.42 | < 0.36 | < 0.43 | < 0.4 | < 0.38 | < 0.4 | < 0.41 | < 0.42 | < 0.41 | 100 | 200 | -- | -- |
| **TCLP (mg/L)** | | | | | | | | | | | | | | |
| Lead TCLP (mg/L) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.29 | -- | -- | -- | -- |
| **General Chemistry** | | | | | | | | | | | | | | |
| Corrosivity (pH) | 8.8 | 8.44 | 8.38 | 7.52 | 8.22 | 5.8 | 7.12 | 6.42 | 7 | 6.92 | -- | -- | -- | -- |
| **Physical Conditions** | | | | | | | | | | | | | | |
| Flashpoint ($^{o}$F) | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | -- | -- | -- | -- |
| Reactivity - Cyanide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | -- | -- | -- | -- |
| Reactivity - Sulfide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | -- | -- | -- | -- |
| Specific Conductance @ 25$^{o}$C (µmhos/cm) | 92 | 156 | 269 | 730 | 306 | 50 | 7 | 9 | 68 | 39 | -- | -- | 8000 | 4000 |

Notes:
Laboratory analytical results compared to RCS-1, RCS-2,
VOCs = Volatile Organic Carbons; SVOCs = Semi-Volat
D = identified in an analysis that has been diluted
P = pesticide target analyte had a % difference > 25% bet
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceedance of MassDEP MCP RCS-1
Exceedance of MassDEP MCP RCS-1 & RCS-2
Exceedance of COMM-97 - Lined Landfill criteria
Exceedance of COMM-97 - Unlined Landfill criteria

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | I-3 | I-3 | I-5 | I-7 | II-0.5 | II-8.5 | II-8.5 | JJ II-2 | JJ II-6 | | | | |
| Sample ID | I-3 | I-3 4-8 | I-5 | I-7 | II-0.5 | II-8.5 | II-8.5 5-6 | JJ II-2 | JJ II-6 | | | | |
| Sample Depth (feet) | 0-5 | 4-8 | 0-4.3 | 0-4.3 | 5-6 | 0-5 | 5-6 | 0-3.5 | 0-4.5 | | | | |
| Sample Date | 5/1/2024 | 6/21/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/29/2024 | 5/3/2024 | 4/29/224 | 4/29/2024 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| Laboratory Sample ID | 24E0050-04 | 24F0927-02 | 24E0124-14 | 24E0124-13 | 24D1044-04 | 24D1044-03 | 24E0124-18 | 24D1044-02 | 24D1044-01 | | | | |
| **VOCs (mg/kg)** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,1,1-Trichloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 30 | 600 | -- | -- |
| 1,1,2,2-Tetrachloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.005 | 0.02 | -- | -- |
| 1,1,2-Trichloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.1 | 2 | -- | -- |
| 1,1-Dichloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.4 | 9 | -- | -- |
| 1,1-Dichloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 3 | 40 | -- | -- |
| 1,1-Dichloropropene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,2,3-Trichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,2,3-Trichloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 2 | 6 | -- | -- |
| 1,2-Dibromo-3-chloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,2-Dibromoethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 9 | 100 | -- | -- |
| 1,2-Dichloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,3,4-Trimethylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,3,5-Trimethylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,3-Dichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 3 | 200 | -- | -- |
| 1,3-Dichloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,4-Dioxane | < 0.093 | < 0.098 | < 0.095 | < 0.110 | < 0.093 | < 0.112 | < 0.296 | < 0.093 | < 0.095 | 0.2 | 5 | -- | -- |
| 2,2-Dichloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 4-Isopropyltoluene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Acetone | < 0.046 | < 0.049 | < 0.048 | 0.091 | < 0.047 | 0.071 | 0.246 | < 0.047 | < 0.048 | 6 | 50 | -- | -- |
| Benzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 2 | 200 | -- | -- |
| Bromobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Bromochloromethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Bromodichloromethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| Bromoform | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.1 | 1 | -- | -- |
| Bromomethane | < 0.009 | < 0.010 | < 0.010 | < 0.011 | < 0.009 | < 0.011 | < 0.030 | < 0.009 | < 0.010 | 0.5 | 0.5 | -- | -- |
| Carbon Disulfide | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Carbon Tetrachloride | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 5 | 5 | -- | -- |
| Chlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 1 | 3 | -- | -- |
| Chlorodibromomethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.005 | 0.03 | -- | -- |
| Chloroethane | < 0.009 | < 0.010 | < 0.010 | < 0.011 | < 0.009 | < 0.011 | < 0.030 | < 0.009 | < 0.010 | -- | -- | -- | -- |
| Chloroform | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.2 | 0.2 | -- | -- |
| Cis-1,2-dichloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| cis-1,3-Dichloropropene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Dibromomethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Dichlorodifluoromethane | < 0.009 | < 0.010 | < 0.010 | < 0.011 | < 0.009 | < 0.011 | < 0.030 | < 0.009 | < 0.010 | -- | -- | -- | -- |
| Dichloromethane | < 0.023 | < 0.024 | < 0.024 | < 0.028 | < 0.023 | < 0.028 | < 0.074 | < 0.023 | < 0.024 | 0.1 | 3 | -- | -- |
| Diisopropyl Ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Ethyl benzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 40 | 1000 | -- | -- |
| Ethyl ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Ethyl tert-butyl ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Fluorotrichloromethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Hexachlorobutadiene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 30 | 100 | -- | -- |
| Hexachloroethane | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.7 | 3 | -- | -- |
| Isopropyl benzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| m,p-Xylenes | < 0.009 | < 0.010 | < 0.010 | < 0.011 | < 0.009 | < 0.011 | < 0.030 | < 0.009 | < 0.010 | -- | -- | -- | -- |
| Methyl Chloride | < 0.009 | < 0.010 | < 0.010 | < 0.011 | < 0.009 | < 0.011 | < 0.030 | < 0.009 | < 0.010 | -- | -- | -- | -- |
| Methyl ethyl ketone | < 0.046 | < 0.049 | < 0.048 | < 0.055 | < 0.047 | < 0.056 | < 0.148 | < 0.047 | < 0.048 | 4 | 50 | -- | -- |
| Methyl isobutyl ketone | < 0.046 | < 0.049 | < 0.048 | < 0.055 | < 0.047 | < 0.056 | < 0.148 | < 0.047 | < 0.048 | 0.4 | 50 | -- | -- |
| Methyl n-butyl ketone | < 0.046 | < 0.049 | < 0.048 | < 0.055 | < 0.047 | < 0.056 | < 0.148 | < 0.047 | < 0.048 | -- | -- | -- | -- |
| Methyl-tert-butyl ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.1 | 100 | -- | -- |
| n-Butylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| n-Propylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Naphthalene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 4 | 20 | -- | -- |
| O-chlorotoluene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| o-Xylenes | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| p-Chlorotoluene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| P-dichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.7 | 1 | -- | -- |
| sec-Butylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Styrene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 3 | 4 | -- | -- |
| Tert-amyl-methyl ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| tert-Butylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Tetrachloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 1 | 4 | -- | -- |
| Tetrahydrofuran | < 0.019 | < 0.020 | < 0.019 | < 0.022 | < 0.019 | < 0.022 | < 0.059 | < 0.019 | < 0.019 | -- | -- | -- | -- |
| Toluene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 30 | 1000 | -- | -- |
| Trans-1,2-dichloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 1 | 1 | -- | -- |
| trans-1,3-Dichloropropene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Trichloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.3 | 0.3 | -- | -- |
| Vinyl Chloride | < 0.009 | < 0.010 | < 0.010 | < 0.011 | < 0.009 | < 0.011 | < 0.030 | < 0.009 | < 0.010 | 0.3 | 0.7 | -- | -- |
| Xylene | < 0.009 | < 0.010 | < 0.010 | < 0.011 | < 0.009 | < 0.011 | < 0.030 | < 0.009 | < 0.010 | 100 | 100 | -- | -- |
| Total VOCs | 0 | 0 | 0 | 0.091 | 0 | 0.071 | 0.246 | 0 | 0 | -- | -- | 10 | 4 |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | I-3 | I-3 | I-5 | I-7 | II-0.5 | II-8.5 | II-8.5 | JJ II-2 | JJ II-6 | | | | |
| Sample ID | I-3 | I-3 4-8 | I-5 | I-7 | II-0.5 | II-8.5 | II-8.5 5-6 | JJ II-2 | JJ II-6 | | | | |
| Sample Depth (feet) | 0-5 | 4-8 | 0-4.3 | 0-4.3 | 5-6 | 0-5 | 5-6 | 0-3.5 | 0-4.5 | | | | |
| Sample Date | 5/1/2024 | 6/21/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/29/2024 | 5/3/2024 | 4/29/224 | 4/29/2024 | | | | |
| Laboratory Sample ID | 24E0050-04 | 24F0927-02 | 24E0124-14 | 24E0124-13 | 24D1044-04 | 24D1044-03 | 24E0124-18 | 24D1044-02 | 24D1044-01 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | 0.04 | < 0.03 | < 0.03 | < 0.03 | < 0.10 | < 0.03 | < 0.03 | 0.05 | 6 | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.98 | < 0.27 | < 0.28 | 2 | 6 | -- | -- |
| 1,2-Dichlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.98 | < 0.27 | < 0.28 | 9 | 100 | -- | -- |
| 1,3-Dichlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.98 | < 0.27 | < 0.28 | 3 | 200 | -- | -- |
| 2,4,5-Trichlorophenol | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.98 | < 0.27 | < 0.28 | 4 | 600 | -- | -- |
| 2,4,6-Trichlorophenol | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.98 | < 0.27 | < 0.28 | 0.7 | 20 | -- | -- |
| 2,4-Dichlorophenol | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.98 | < 0.27 | < 0.28 | 0.7 | 40 | -- | -- |
| 2,4-Dimethylphenol | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.98 | < 0.27 | < 0.28 | 0.7 | 100 | -- | -- |
| 2,4-Dinitrophenol | < 1.08 | < 1.11 | < 1.07 | < 1.10 | < 1.06 | < 1.23 | < 3.95 | < 1.08 | < 1.12 | 3 | 50 | -- | -- |
| 2,4-Dinitrotoluene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.7 | 10 | -- | -- |
| 2,6-Dinitrotoluene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| 2-Chloronaphthalene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| 2-Chlorophenol | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.7 | 100 | -- | -- |
| 2-Methylnaphthalene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.7 | 80 | -- | -- |
| 2-Methylphenol | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| 2-Nitrophenol | < 0.54 | < 0.55 | < 0.54 | < 0.55 | < 0.53 | < 0.61 | < 1.98 | < 0.54 | < 0.56 | -- | -- | -- | -- |
| 3 & 4 Methylphenol | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| 3,3'-Dichlorobenzidine | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 3 | 20 | -- | -- |
| 4-Bromophenyl phenyl ether | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| 4-Nitrophenol | < 1.08 | < 1.11 | < 1.07 | < 1.10 | < 1.06 | < 1.23 | < 3.95 | < 1.08 | < 1.12 | -- | -- | -- | -- |
| Acenaphthene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 4 | 3000 | -- | -- |
| Acenaphthylene | < 0.27 | < 0.28 | 1.05 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 2 | 10 | -- | -- |
| Acetophenone | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| Aniline | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| Anthracene | < 0.27 | < 0.28 | 0.82 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 1000 | 3000 | -- | -- |
| Azobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| Benzo(A)anthracene | < 0.27 | < 0.28 | 3.22 | < 0.27 | 0.65 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 20 | 300 | -- | -- |
| Benzo(A)pyrene | < 0.27 | < 0.28 | 2.23 | < 0.27 | 0.62 | < 0.31 | < 0.99 | < 0.271 | < 0.28 | 2 | 30 | -- | -- |
| Benzo(B)fluoranthene | < 0.27 | < 0.28 | 2.20 | < 0.27 | 0.67 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 20 | 300 | -- | -- |
| Benzo(g,h,i)Perylene | < 0.27 | < 0.28 | 1.19 | < 0.27 | 0.38 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 1000 | 3000 | -- | -- |
| Benzo(K)fluoranthene | < 0.27 | < 0.28 | 0.71 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 200 | 3000 | -- | -- |
| bis (2-chloroethoxy) Methane | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| bis (2-chloroethyl) Ether | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.7 | 0.7 | -- | -- |
| bis (2-chloroisopropyl) Ether | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.7 | 0.7 | -- | -- |
| Bis (2-ethylhexyl) phthalate | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 100 | 700 | -- | -- |
| Butylbenzylphthalate | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| Chrysene | < 0.27 | < 0.28 | 4.09 | < 0.27 | 0.66 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 200 | 3000 | -- | -- |
| Di-n-octyl phthalate | < 0.54 | < 0.55 | < 0.54 | < 0.55 | < 0.53 | < 0.61 | < 1.98 | < 0.54 | < 0.561 | -- | -- | -- | -- |
| Dibenzo(A,H)anthracene | < 0.27 | < 0.28 | 0.38 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 2 | 30 | -- | -- |
| Dibenzofuran | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| Diethyl phthalate | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 10 | 200 | -- | -- |
| Dimethyl phthalate | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.7 | 50 | -- | -- |
| Fluoranthene | 0.41 | 0.33 | 3.58 | < 0.27 | 1.44 | 0.42 | < 0.99 | < 0.27 | < 0.28 | 1000 | 3000 | -- | -- |
| Fluorene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 1000 | 3000 | -- | -- |
| Hexachlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.7 | 0.9 | -- | -- |
| Hexachlorobutadiene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 30 | 100 | -- | -- |
| Hexachloroethane | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.7 | 3 | -- | -- |
| Indeno (1,2,3-cd) pyrene | < 0.27 | < 0.28 | 1.00 | < 0.27 | 0.37 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 20 | 300 | -- | -- |
| Isophorone | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| N-dibutyl phthalate | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| n-Nitrosodimethylamine | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| Naphthalene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 4 | 20 | -- | -- |
| Nitrobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| P-chloroaniline | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 1 | 3 | -- | -- |
| P-dichlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.7 | 1 | -- | -- |
| Pentachlorophenol | < 1.08 | < 1.11 | < 1.07 | < 1.10 | < 1.06 | < 1.23 | < 3.95 | < 1.08 | < 1.12 | 3 | 10 | -- | -- |
| Phenanthrene | < 0.27 | < 0.28 | 2.48 | < 0.27 | 0.98 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 10 | 1000 | -- | -- |
| Phenols | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.9 | 20 | -- | -- |
| Pyrene | 0.44 | 0.41 | 5.88 | < 0.27 | 1.24 | 0.40 | < 0.99 | < 0.27 | < 0.28 | 1000 | 3000 | -- | -- |
| Pyridine | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| **Total SVOCs** | 0.86 | 0.74 | 28.87 | 0.00 | 7.00 | 0.83 | 0 | 0 | 0 | -- | -- | 100 | 100 |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | |
| C9-C36 | 73.80 | 73.20 | 16.00 | < 11.90 | 32.00 | 36.20 | 273.00 | < 10.60 | < 11 | -- | -- | -- | -- |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | I-3 | I-3 | I-5 | I-7 | II-0.5 | II-8.5 | II-8.5 | JJ II-2 | JJ II-6 | | | | |
| Sample ID | I-3 | I-3 4-8 | I-5 | I-7 | II-0.5 | II-8.5 | II-8.5 5-6 | JJ II-2 | JJ II-6 | | | | |
| Sample Depth (feet) | 0-5 | 4-8 | 0-4.3 | 0-4.3 | 5-6 | 0-5 | 5-6 | 0-3.5 | 0-4.5 | | | | |
| Sample Date | 5/1/2024 | 6/21/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/29/2024 | 5/3/2024 | 4/29/224 | 4/29/2024 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| Laboratory Sample ID | 24E0050-04 | 24F0927-02 | 24E0124-14 | 24E0124-13 | 24D1044-04 | 24D1044-03 | 24E0124-18 | 24D1044-02 | 24D1044-01 | | | | |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | |
| 2,2-Dichloropropionic acid | < 0.049 | < 0.051 | < 0.048 | < 0.051 | < 0.046 | < 0.055 | < 0.088 | < 0.049 | < 0.048 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxyacetic acid | < 0.010 | < 0.011 | < 0.010 | < 0.011 | < 0.010 | < 0.011 | < 0.018 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxypropionic acid | < 0.010 | < 0.011 | < 0.010 | < 0.011 | < 0.010 | < 0.011 | < 0.018 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| 2,4-Dichlorophenoxyacetic acid | < 0.050 | < 0.053 | < 0.050 | < 0.052 | < 0.047 | 0.107 | < 0.091 | < 0.050 | < 0.049 | -- | -- | -- | -- |
| 2-(2-Methyl-1,4-chlorophenoxy) propionic acid | < 2.520 | < 2.640 | < 2.480 | < 2.610 | < 2.370 | < 2.830 | < 4.550 | < 2.520 | < 2.460 | -- | -- | -- | -- |
| 4,4'-DDD | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 10 | 40 | -- | -- |
| 4,4'-DDE | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 7 | 30 | -- | -- |
| 4,4'-DDT | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 7 | 30 | -- | -- |
| 4-(2,4-dichlorophenoxy)-Butanoic acid | < 0.051 | < 0.053 | < 0.050 | < 0.053 | < 0.048 | < 0.057 | < 0.092 | < 0.051 | < 0.050 | -- | -- | -- | -- |
| Aldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 0.09 | 0.5 | -- | -- |
| beta-BHC | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-delta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-gamma | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.003 | < 0.002 | < 0.002 | 0.003 | 0.5 | -- | -- |
| Chlordane (mixture of isomers) | < 0.021 | < 0.022 | < 0.023 | < 0.023 | < 0.021 | < 0.025 | < 0.041 | < 0.022 | < 0.022 | -- | -- | -- | -- |
| Chlordane, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Dicamba | < 0.010 | < 0.011 | < 0.010 | < 0.010 | < 0.009 | < 0.011 | < 0.018 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| hloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | < 0.050 | < 0.053 | < 0.050 | < 0.052 | < 0.047 | < 0.057 | < 0.091 | < 0.050 | < 0.049 | -- | -- | -- | -- |
| Dieldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.037 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 0.09 | 0.6 | -- | -- |
| Dinoseb | < 0.051 | < 0.053 | < 0.050 | < 0.053 | < 0.048 | < 0.057 | < 0.092 | < 0.051 | < 0.050 | -- | -- | -- | -- |
| Endosulfan sulfate | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, beta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.009 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 20 | 30 | -- | -- |
| Endrin ketone | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Heptachlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 0.3 | 2 | -- | -- |
| Heptachlor Epoxide | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 0.2 | 1 | -- | -- |
| Hexachlorobenzene | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 0.7 | 0.9 | -- | -- |
| Methoxychlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 300 | 400 | -- | -- |
| Methylchlorophenoxyacetic acid | < 2.500 | < 2.610 | < 2.450 | < 2.580 | < 2.350 | < 2.800 | < 4.500 | < 2.490 | < 2.430 | -- | -- | -- | -- |
| Toxaphene | < 0.132 | < 0.139 | < 0.143 | < 0.146 | < 0.131 | < 0.153 | < 0.257 | < 0.136 | < 0.135 | -- | -- | -- | -- |
| trans-Chlordane | < 0.003 | 0.004 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| **PCBs (mg/kg)** | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.06 | < 0.05 | 0.2 | < 0.05 | 0.1 | < 0.1 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1254 | 0.1 | 0.3 | 0.1 | 0.3 | 1.2 D | 0.08 | < 0.1 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | | | | |
| PCB Aroclor 1262 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| **Total PCBs** | 0.1 | 0.3 | 0.1 | 0.5 | 1.2 | 0.18 | 0 | 0 | 0 | 1 | 4 | < 2 | < 2 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | |
| Arsenic | 2.58 | < 0.99 | 3.94 | 5.81 | 1.83 | 6.55 | 6.92 | 2.62 | 3.29 | 20 | 20 | 40 | 40 |
| Barium | 35.2 | 13 | 14.2 | 24.1 | 18.4 | 86.3 | 55.4 | 11.3 | 13 | 1000 | 3000 | -- | -- |
| Cadmium | < 0.36 | < 0.49 | < 0.39 | < 0.46 | < 0.37 | < 0.45 | < 0.7 | < 0.39 | < 0.38 | 80 | 80 | 80 | 30 |
| Chromium | 7.1 | 5.09 | 9.6 | 19.8 | 3.76 | 12.1 | 9.25 | 5.07 | 6.43 | 100 | 200 | 1000 | 1000 |
| Lead | 34 | 35.2 | 19.4 | 27.3 | 39.4 | 347 | 21.4 | 6.81 | 12.8 | 200 | 600 | 2000 | 1000 |
| Mercury | 0.08 | < 0.03 | 0.13 | 0.093 | 0.069 | 0.575 | < 0.063 | < 0.035 | < 0.031 | 20 | 40 | 10 | 10 |
| Selenium | < 3.59 | < 4.95 | < 3.92 | < 4.58 | < 3.66 | < 4.54 | < 6.98 | < 3.9 | < 3.76 | 400 | 800 | -- | -- |
| Silver | < 0.36 | < 0.49 | < 0.39 | < 0.46 | < 0.37 | < 0.45 | < 0.7 | < 0.39 | < 0.38 | 100 | 200 | -- | -- |
| **TCLP (mg/L)** | | | | | | | | | | | | | |
| Lead TCLP (mg/L) | -- | -- | -- | -- | -- | 0.72 | -- | -- | -- | -- | -- | -- | -- |
| **General Chemistry** | | | | | | | | | | | | | |
| Corrosivity (pH) | 7.96 | 7.35 | 7.58 | 6.9 | 7.1 | 6.7 | 7.28 | 6.78 | 6.53 | -- | -- | -- | -- |
| **Physical Conditions** | | | | | | | | | | | | | |
| Flashpoint (°F) | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | -- | -- | -- | -- |
| Reactivity - Cyanide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 3.7 | < 2 | < 2 | -- | -- | -- | -- |
| Reactivity - Sulfide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | -- | -- | -- | -- |
| Specific Conductance @ 25°C (µmhos/cm) | 473 | 71 | 104 | 177 | 30 | 562 | 328 | 9 | 35 | -- | -- | 8000 | 4000 |

Notes:
Laboratory analytical results compared to RCS-1, RCS-2,
VOCs = Volatile Organic Carbons; SVOCs = Semi-Volat
D = identified in an analysis that has been diluted
P = pesticide target analyte had a % difference > 25% bet
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceedance of MassDEP MCP RCS-1
Exceedance of MassDEP MCP RCS-1 & RCS-2
Exceedance of COMM-97 - Lined Landfill criteria
Exceedance of COMM-97 - Unlined Landfill criteria

# APPENDIX A

# MASSDEP PHASE I SITE ASSESSMENT MAP

# MassDEP - Bureau of Waste Site Cleanup

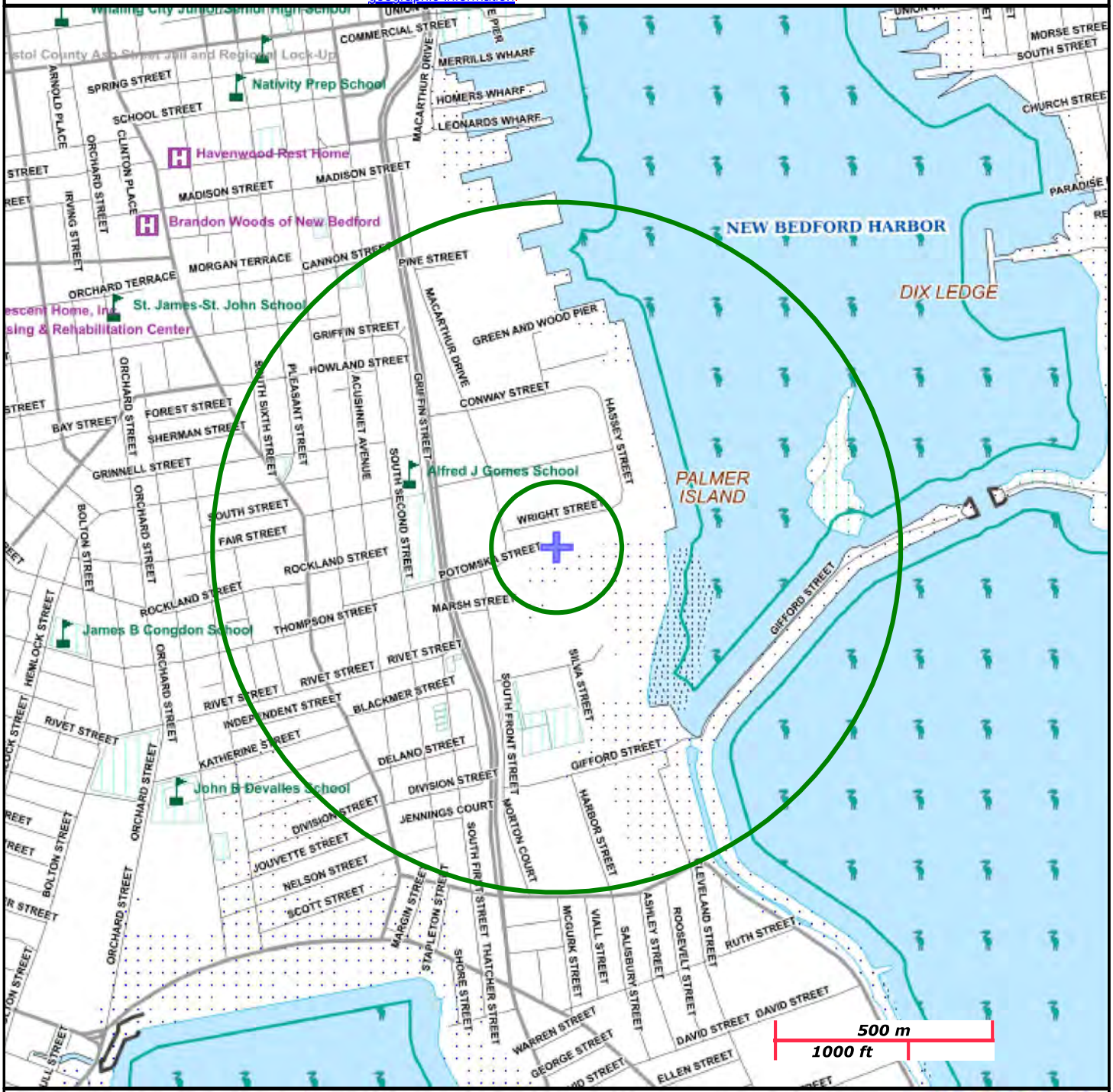
## Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

**Site Information:**
MASSCEC SUBJECT PROPERTIES
54 WRIGHT STREET NEW BEDFORD, MA

NAD83 UTM Meters:
4609754mN , 340232mE (Zone: 19)
January 8, 2024

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at: https://www.mass.gov/orgs/massgis-bureau-of-geographic-information.

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection




Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

NHESP Pri-Hab of Rare Species; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com.GW,SW, Emerg., Non-Com.

# APPENDIX B

# SOIL MANAGEMENT PLAN

# SOIL MANAGEMENT PLAN

## NEW BEDFORD MARINE COMMERCE TERMINAL
## MASSACHUSETTS CLEAN ENERGY CENTER
## 4 WRIGHT STREET
## NEW BEDFORD, MASSACHUSETTS

**Prepared for:**

**FOTH INFRASTRUCTURE & ENVIRONMENT, LLC**
**15 CREEK ROAD, MARION, MA 02738**

**Prepared By:**

**CIVIL & ENVIRONMENTAL CONSULTANTS, INC.**
**31 BELLOWS ROAD**
**RAYNHAM, MA 02767**

**CEC Project 332-344**

**MARCH 2025**

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EXHIBIT C – Activity and Use Limitations
EXHIBIT D – Boring Logs and Test Pits

# 1.0 INTRODUCTION

Civil & Environmental Consultants, Inc. (CEC) has prepared this Soil Management Plan (SMP) to address earthwork activities related to the redevelopment of the properties associated with the New Bedford Marine Commerce Terminal (NBMCT) in New Bedford, Massachusetts (the Property). A Locus Map and a Site Overview map, and AUL Overview map are provided as Figures 1 through 3, respectively. This Soil Management Plan was prepared on behalf of the Massachusetts Clean Energy Technology Center of Boston, Massachusetts (MassCEC) and is intended to broadly apply to construction activities that are conducted by or on behalf of MassCEC on the Property.

## 1.1 PURPOSE

The purpose of this SMP is to present the planned procedures for the handling, managing, and relocation of soil during earthwork activities associated with the construction project. The specific objectives of the SMP are to:

- Describe general Site-wide excavation/earthwork activities and activities where the excavation extends into potentially OHM-impacted soils and/or fill material;
- Describe the on-Site re-use of soil/fill during the earthwork;
- Describe general site controls and soil erosion mitigation procedures.
- Describe the segregation of soil and stockpiling procedures;
- Describe the procedures for off-Site transport and disposal, reuse, or recycling of soils; and
- Describe the controls for dust, odor, and vapor mitigation and monitoring.

This SMP is applicable to two distinct types of soil; 1) General fill (dense grade aggregate, granular fill, etc..) that has been imported onto the Disposal Site(s) are part of the protective cap and/or as an improved surface and 2) Urban fill and native soils which may include ash, peat, sand, debris and may contain contaminants such as polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), or metals.

## 1.2 ROLES AND RESPONSIBILITIES

MassCEC is responsible for implementation of projects at the Property conducted under this SMP. the earthwork will be performed by a qualified contractor (the Contractor) and environmental services will be provided by a Licensed Site Professional (LSP). The following identifies the typical roles and responsibilities of each organization involved in the proposed earthwork. However, some responsibilities may vary based upon the specific project:

- The Contractor will typically perform all earthwork activities, including excavation; soil management; off-Site transportation and appropriate disposal, re-use, or recycling of any materials not to be re-used on-Site; and, import/placement of fill/backfill required to achieve necessary grades for the project.

- The Contractor will typically be prepared and responsible for enacting mitigating measures of dust, odor, and vapor suppression as appropriate and in accordance with section 4.0 of this SMP.

- The LSP will prepare a Health and Safety Plan (HASP) for its employees, as required by 310 CMR 40.0871(e). The Contractor is typically responsible for their own employee's health and safety and for conformance with Occupational Health and Safety Administration (OSHA) standards and regulations.

- The LSP's firm will typically provide environmental consulting services including LSP services, as necessary, related to the earthwork activities.

- MassCEC or the Contractor will inform the LSP of any new (currently undetected), or significantly different circumstances relating to soil conditions and/or potential contamination discovered during the performance of the work.

With the existence of known reportable conditions within Disposal Site Boundaries and as defined in the Massachusetts Contingency Plan, 310 CMR 40.0000 (the MCP), handling of the soils located on the Property requires best management practices (BMPs) to ensure that a condition of significant risk is not created as a result of the earthwork activities. Reportable conditions existing on the Property include OHM-impacted materials at the expansion parcels and OHM-impacted materials underlying the existing imported protective cap within the NBMCT.

## 2.0 SITE AND SURROUNDING AREA DESCRIPTION

The NBMCT is situated within an industrial area along the coast of New Bedford, Massachusetts. The NBMCT is comprised of a 30-acre facility between JFK Memorial Highway and the New Bedford Harbor and ~8 acres of recently acquired commercial property that is proposed to be a redeveloped as part of an expanded facility (expansion Sites); The 30-acre facility is predominately structurally undeveloped but includes an approximately 27,500 square foot single story building on 4 Wright Street. The existing main terminal portion of the NBMCT is subject to multiple Activity and Use Limitations (AULs. The Property includes the following sites with the associated Release Tracking Numbers (RTNs) listed if applicable:

**Shuster Property (former RIST, LLC)**
Address: Front Street
Parcel ID/Lot Size: 31- 288 / ~7.74 acres
Current Owner: MassCEC
RTN: 4-23736
Compliance Status/Date: Tier1D / 12/27/2012

**Shuster "Jog"**
Address: South of Wright Street
Parcel ID/Lot Size: 31- 289 / ~0.39 acres
Current Owner: MassCEC
It is unclear if this is part of any mapped Disposal Site, but CEC understands it will be covered by a pending Permanent Solution Statement (PSS) and AUL.

**New Bedford Radio, Inc., (Hall Comm)**
Address: South Front Street Lot 1 & 2
Parcel ID / Lot Size: 31-234 (~4.17 acres) / 31- 291 (~0.23 acres)
Current Owners: MassCEC / NB Radio, Inc.
RTN: 4-25350
Compliance Status/Date: Tier1D / 10/08/2015

**(Former) DMF Parcel 1**
Address: North of 16 Blackmer Street
Parcel ID/Lot Size: 25A-53 / ~1.2 acres
Current Owner: City of New Bedford
RTN: 4-24296
Compliance Status/Date: Tier1D / 12/03/2013

**DMF Parcel 2**
Address: 16 Blackmer Street
Parcel ID/Lot Size: 25A-49 / ~2.2 acres
Current Owner: City of New Bedford
RTN: 4-15490
Compliance Status/Date: RAO (i.e. a Permanent Solution was achieved) / 3/27/2009

**New Bedford Redevelopment Authority**
Address: Southeast Blackmer Street
Parcel ID/Lot Size: 25A- 48 / ~9.23 acres
Current Owner: City of New Bedford
It is unclear if this is part of any mapped Disposal Site, but CEC understands it will be covered by a pending Permanent Solution Statement (PSS) and AUL.

**Former Dartmouth Finishing Site**
Address: 45 Cove Street
Parcel ID/Lot Size: 21- 45 / ~4.3 acres
Current Owner: City of New Bedford
RTN: 4-23616
Compliance Status/Date: Tier Classified / 10/03/2012

**Expansion Site 1**
Addresses: 54 Wright Street & 18 Wright Street
Parcel ID/Lot Size: 31-265 & 31-249 / ~2.1 acres
Current Owner: MassCEC
RTN 4-50261
Compliance Status/Date: 120-day notification / 5/24/2024 & 1/17/2025

**Expansion Site 2**
Addresses: 350 South Front Street /0 SS MacArthur Boulevard & 360-382 South Front Street
Parcel ID/Lot Size: 31-218 & 31-237 & 31-144 / ~2.15 acres
Current Owner: MassCEC
RTN 4-50261
Compliance Status/Date: 120-day notification / 5/24/2024 & 1/17/2025

**Expansion Site 3**
Addresses: 4 Wright Street /portion of R ES South Front Street
Parcel ID/Lot Size: 31- 263 & 31-288 / ~2.2 acres
Current Owner: MassCEC
RTN 4-50261
Compliance Status/Date: 120-day notification / 5/24/2024 & 1/17/2025

The Property structures include the following:

| Property | Approximate Building Size (square feet) | Structure |
|---|---|---|
| 4 Wright Street | 27,500 | Single-story concrete building |
| 18 Wright Street | 10,000 | Single-story metal building |
| 54 Wright Street | 3,750 | Commercial warehouse |
| 350 South Front Street & 0 SS Macarthur Boulevard | 6,400 | Single-story metal building |
| 360-382 South Front Street | 21,500 | Single-story metal building |

Currently, greater than 21-acres of the NBMCT have been engineered and constructed to accommodate a heavy-lift capacity and consists of a surficial dense grade aggregate pavement. Adjacent properties primarily include seafood and seafood related commercial properties. Additionally, there are abutting commercial retailers to the 45 Cove Street property.

## 2.1 SITE HISTORY

Historically, situated within the footprint of Shuster and DMF parcels was the former Potomska Mills complex which operated from the late 1800s until it was demolished in 1936. Since the early 1940s, these parcels have been vacant of industrial activities and remain structurally undeveloped lots.

The Former Dartmouth Finishing Site was the location of a fabric finishing and dyeing business that discontinued operations after its bankruptcy in 1994. Prior to the Dartmouth Finishing companies' occupancy included The Hathaway Manufacturing Company (textiles) in the 1950s; and Dartmouth Mills (textiles) in the early 1900s. The property was structurally improved upon with a 120,000 square foot single-story building that was demolished between 1999 and 2001. Also on the property were two underground storage tanks (USTs). The USTs are associated with an RTN (4-23616) and were removed in 2004 as part of remedial actions.

54 Wright Street (Site 1) was historically occupied by a boat builder and for the storage of fisherman's lockers between 1888 and 1950. The current building at the property was erected around 1978 for use as a shop for auto repairs and marine electronics.

18 Wright Street (Site 1) was undeveloped prior to 1950, then historically used for the storage of fisherman's lockers as of 1950. The current building at the property was erected around 1984 for use as a fish processing plant.

350 South Front Street (Site 2) was historically occupied by Potomska Mill beginning in 1888 through 1936 when it was demolished. A building was originally erected at the property around 1950 for use as a fish processing facility, followed by the re-development of the property in 1996 with the existing building for use by fish processing companies.

360-382 South Front Street (Site 2) was historically occupied by Potomska Mill beginning in 1888 through 1936 when it was demolished. The property remained undeveloped until approximately 2000 when the current building was erected for use as a fish processing facility.

Sites 1 through 3 and the surrounding area was located near or in the Acushnet River until it was filled in the 1960s and 1970s. The United States Environmental Protection Agency (USEPA) has been and continues to assess and remediate the Acushnet Estuary Superfund Site which encompasses the river and estuaries is impacted with PCBs and metals. The source of the fill material used to create the land at the Subject Property and surrounding area is unknown, nor if the sediment in the river was removed prior to emplacing the fill material.

## 2.2 RELEASE HISTORY

**Shuster Property (former RIST, LLC)**
**RTN: 4-23736**

In August 2011, a subsurface and groundwater investigation was conducted that included soil borings and monitoring well installation, test pit excavation, and soil and groundwater sampling. Contaminants were detected in soils above reportable concentrations (RCS-2) identified in the MCP (310 CMR 40.1600) that included:

- PCBs;
- total lead;
- total petroleum hydrocarbons (TPH);
- extractable petroleum hydrocarbons (EPH) fractions;
- polycyclic aromatic hydrocarbons (PAH); and
- volatile petroleum hydrocarbon (VPH) fractions and several target volatile organic compounds (VOC).

Naphthalene was also detected in groundwater above the applicable MassDEP reportable concentration (RCGW-2).

An initial RAM Plan was submitted to MassDEP on July 3, 2013 that outlined RAM activities associated with the improvements to the main terminal on this parcel. Construction activities occurring under the RAM Plan included soils management and excavation. Excavated OHM-impacted soils were removed to off-site facilities if PCB concentrations were greater than 50 parts per million (ppm) and/or if EPH/TPH concentrations were greater than 10,000 ppm. A protective cap of clean dense grade aggregate was installed to a depth of three feet as an acceptable alternative to an asphalt cap. As discussed above, the status of this Disposal Site is currently on record with MassDEP as a Tier 1D, but it is CEC's understanding that the Disposal Site is considered adequately regulated (Exhibit A).

**New Bedford Radio, Inc., (Hall Comm)**
**RTN: 4-25350**

Extensive surficial soil sampling was completed on this parcel and involved over 1,000 surficial soil samples. Additionally, in January 2014 eight test pits were excavated and six soil borings were advanced. Test pits were advanced to a depth of 6 feet below grade surface (bgs) and soil borings were advanced to 11 feet bgs.

A release was reported to MassDEP on October 1, 2014, due to exceedances of MCP RCS-2 values for the following contaminants:

- PCB;
- lead;
- naphthalene; and
- cadmium.

A RAM Plan was filed on October 20, 2014, related to the New Bedford Marine Commerce Terminal (NBMCT) construction activities that required soils management within the Disposal Site for off-site disposal and onsite reuse. PCB-impacted soils with concentrations greater than 50 ppm were sent to off-site facilities for disposal. A protective cap of clean dense grade aggregate was installed to a depth of three feet as an acceptable alternative to an asphalt cap

A RAM Status Report was filed with MassDEP on May 17, 2016, and an AUL was filed for this Disposal Site on September 16, 2019. The AUL applies to both "Lot 1" and "Lot 2" of Map 31 parcels 234 and 291. The AUL conditions for each of these parcels vary. As discussed above, the status of this Disposal Site is currently on record with MassDEP as a Tier 1D, but it is CEC's understanding that the Disposal Site is considered adequately regulated (Exhibit A).

**DMF Parcel 1**
**RTN: 4-24296**

A release was reported to MassDEP in November 2012 after Phase I investigations performed for the NBMCT identified PCB concentrations in soils greater than applicable RCS-2 standard.

The initial RAM Plan submitted to MassDEP on July 3, 2013, outlined RAM activities for the Shuster Property and three abutting RTNs, including DMF Parcels 1 and 2 and the Former Dartmouth Finishing Site. Construction activities occurring under the RAM plan included soils management and soils excavation. Excavated OHM-impacted soils were removed to offsite facilities if PCB concentrations were greater than 50 ppm and/or if EPH/TPH concentrations were greater than 10,000 ppm. A protective cap of clean dense grade aggregate was installed to a depth of three feet as an acceptable alternative to an asphalt cap. As discussed above, the status of this Disposal Site is currently on record with MassDEP as a Tier 1D, but it is CEC's understanding that the Disposal Site is considered adequately regulated (Exhibit A).

**DMF Parcel 2**
**RTN: 4-15490**

Phase I investigations in January 2000, were limited in scope to the perceived high-risk areas and the Disposal Site assessment included several test pits, discrete soil sampling locations, and installation and sampling of one groundwater monitoring well. There were observed exceedances within soils of MCP RCS-1/RCS-2 criteria for PAHs and lead.

Phase II investigations in May 2006 were performed to verify and delineate the presence of contaminants in soil and groundwater identified in the Phase I investigations. Soil samples were assessed from three borings and six test pits. Borings were advanced to a depth of 2.5 feet bgs and the test pits were sampled in intervals at 0-3 feet bgs and 3–6 feet bgs. Consistent with the results of the Phase I investigations, exceedances of the MCP RCS-1/RCS-2 criteria for PAHs and lead were observed in soil samples collected across the Disposal Site as part of the Phase II investigation.

In 2009, a Method 3 Risk Characterization was completed and a Class A-3 Response Action Outcome (RAO) Statement was submitted. The RAO concluded that an asphalt cap and an AUL would be necessary to ensure soil exposure pathways remained incomplete. The AUL was filed February 3, 2010.

RAM activities performed in 2013 included the removal of OHM-impacted soils and the installation of an acceptable protective cap in areas where the existing asphalt cap would be replaced. Three feet of dense grade aggregate was installed as an acceptable and protective

alternative to the asphalt cap. A SMP was prepared as part of the prior RAM plan. This current SMP is intended as an alternative SMP that can be utilized on any portion of the Property.

A Permanent Solution has been achieved for this Disposal Site.

**Former Dartmouth Finishing Site**
**RTN: 4-23616**

A subsurface investigation in August 2004 included the removal of two 10,000-gallon Underground Storage Tanks (USTs) and approximately 80 cubic yards of petroleum-impacted soil. Petroleum odors and staining were reportedly confined to the northeast portion of each tank footprint.

In October 2011, Phase II investigations identified contaminant concentrations both in soil and groundwater that were greater than the applicable RCS-1/RCGW-2 concentrations. Contaminant concentrations that exceeded the RCS-1 standard included:

- EPH fractions;
- VPH fractions;
- PAHs;
- barium, cadmium, total chromium, and lead.

Dissolved silver was also detected in four monitoring wells greater than the RCGW-2 standard.

A Tier Classification was submitted on October 3, 2012 which classified the site as Tier II.

The initial RAM Plan submitted to MassDEP on July 3, 2013 outlined RAM activities for the Shuster Property and three abutting RTNs including the Former Dartmouth Finishing Site. Construction activities occurring under the RAM Plan included soils management and soils excavation. Excavated OHM-impacted soils were removed (76 tons) to offsite facilities if PCB concentrations were greater than 50 ppm and/or if EPH/TPH concentrations were greater than 10,000 ppm. A protective cap of clean dense grade aggregate (approximately one foot thick) and imported dredge materials (approximately two feet thick) were installed to a depth of three feet as an acceptable alternative to an asphalt cap.

A RAM Completion Report was filed in November of 2015 and an AUL was recorded on April 14, 2016 for this Disposal Site.

**Expansion Sites 1, 2, & 3**
**RTN: 4-50261**

Beginning in November 2023, an initial subsurface investigation was conducted at these Sites after the completion of multiple ASTM Phase I Environmental Site Assessments (ESAs). The subsurface investigation included soil borings across all the Sites with hundreds of samples submitted for various parameters. A release was reported to MassDEP in May 2024 and again in January 2025 for contaminants that were detected in soils above reportable concentrations (RCS-1 and/or RCS-2 depending upon location) identified in the MCP (310 CMR 40.1600) which included:

- PCBs;
- total lead;
- semi-volatile organic compounds (SVOCs);
- volatile petroleum hydrocarbon (VPH) fractions; and
- extractable petroleum hydrocarbons (EPH) fractions.

Additionally, concentrations of PCBs were detected on the Property triggering the Toxic Substances Control Act (TSCA), the regulations for which are listed in Title 40 of the Code of Federal Regulations (CFR) Part 761 (40 CFR Part 761).

An initial RAM plan will be submitted in early 2025, concurrent with this SMP, and will outline RAM activities associated with the expansion of the main terminal at these Sites. The construction will occur in phases between 2025 and 2027, beginning with Site 1. Construction activities occurring under this RAM Plan will include site preparation and demolition, fencing installation, water and electric utility installation, drainage utility installation, installation of foundations for lighting, and any associated excavation of subgrade soils within the Property. Excavated OHM-impacted soils will be removed to off-site facilities if PCB concentrations are greater than 25 milligrams per kilogram (mg/kg). As part of the NBMCT Terminal Expansion, a heavy lift "cap" or surface, similar to the current engineered barrier, is proposed for portions of the Property. The proposed "cap" will consist of two layers of geogrid and select gravel fill, totaling a thickness of approximately 18".

## 2.3 SUBSURFACE CONDITIONS

Based on historical subsurface investigations, generally the top 6 feet of subsurface (prior to capping) consisted of fine to medium sandy fill. Ash, brick, and other debris defined by the MassDEP as "urban fill" have been observed throughout the existing NBMCT at different intervals in both test pits and borings (Exhibit D). A layer of organic soils or peat, likely the native ground surface, has been observed at approximately 3-4 feet bgs, underlying imported fill materials. Post-excavation activities across the existing NBMCT have involved importing dense grade aggregate

and granular fill materials to create a protective cap that limits exposure to potentially OHM-impacted soils and provides an engineered surface for heavy lifting. The thickness of the cap is approximately three-feet across much of the NBMCT. The average groundwater elevation throughout the NBMCT is approximately 5-6 feet bgs, with groundwater elevations ranging from 7-8 feet bgs to as shallow as 3.5 feet bgs.

At the expansion Sites, and based on subsurface investigations completed at these Sites, the top 6 feet of subsurface soils consisted of fine to medium sandy fill. Ash, brick, and other debris defined by the MassDEP as "urban fill" have been observed throughout the parcels at different intervals in the soil borings. A layer of organic soils or peat, likely the native ground surface, has been observed at approximately 8-12 feet bgs, underlying the fill materials, primarily at Site 1. Groundwater was not investigated at this property; however, groundwater elevations are estimated to be similar to the existing NBMCT, ranging from 7-8 feet bgs to as shallow as 3.5 feet bgs.

## 2.4 TYPE OF HAZARD ANTICIPATED

Site workers could potentially be exposed to soils contaminated with volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), lead, and other metals. The primary hazard will be exposure to soil via inhalation, direct/dermal contact, or incidental ingestion of dust generated during soil management activities.

# 3.0 SOIL MANAGEMENT

## 3.1 OVERVIEW

Impacted soil and fill materials are present at the Property within the boundaries of various Disposal Sites (see Exhibit B). Individuals engaged in activities at the Property may be exposed to contaminants through incidental ingestion, dermal contact, or inhalation of soil particles if proper precautions are not taken. Due to the potential to encounter waste materials, CEC recommends the appropriate level of training per OSHA and industry standards.

Regardless of the soil type, the following procedures will be performed when soils are disturbed to minimize or eliminate the potential of exposure.

- During soil disturbance activity, dust suppression (i.e. watering, etc.) techniques must be employed as necessary.

- In the event that an unexpected observation or situation arises during work (i.e. encounter buried drums, metals/construction debris, contaminated soil, etc.), earthwork activities will immediately stop. Workers will not attempt to handle the situation themselves but will contact the appropriate supervisor/personnel for further direction.

- Soil that is exposed or excavated is anticipated to be re-used within the Disposal Site Boundary of origin.

- If soil is encountered that is not structurally suitable for reuse on the Property, it should be characterized through sampling and laboratory analysis to determine the appropriate management of the soil. Soil should not transfer between Disposal Site Boundaries or removed from the Property unless, based on additional characterization, an LSP deems it suitable for a specific on-site reuse or off-Site reuse, recycling or disposal at an appropriately permitted location.

- Significant volumes of groundwater are not expected to enter excavations and/or require management. The management of groundwater is outside of the scope of this document. If dewatering is required, a groundwater management plan should be developed.

- All regrading at the property shall be reviewed to ensure that it maintains the adequate thickness of the protective cap.

- All work shall conform with the attached AUL(s) (Exhibit C).

## 3.2 EXCAVATED MATERIAL CATEGORIES

CEC has developed the following categories to distinguish the soils to be managed under this SMP.

Category A (General fill suitable for reuse): The soil/fill material that is located on the Property that is assumed to be *suitable* for reuse on the Property as part of the construction project. An example of this type of material would be dense grade aggregate originating from a depth of less than 3 feet below grade.

Category B (General fill not suitable for reuse): The soil/fill material that is located on the Property outside of a Disposal Site Boundary and that is assumed *unsuitable* for reuse on the Property as part of the construction project. This is typically soil that is unsuitable for reuse from a geotechnical perspective, but this soil may also contain contaminants and should be assumed to contain contaminants until laboratory testing proves otherwise. An example of this type of material would be organic soils from portion of 80 Wright Street outside of any Disposal Site area.

Category C: OHM-impacted soil that is located within a Disposal Site Boundary on the Property that has been analyzed and determined to be *unsuitable* for reuse on the Property as part of the construction project. This soil may be unsuitable for reuse either due to geotechnical characteristics or concentrations of OHM-related contaminants. This soil will require management under a RAM Plan.

## 3.3 TEMPORARY STOCKPILING OF SOIL

The Contractor should perform the excavation and soil management activities in a manner that minimizes the need to stockpile excavated soil on the Property, to the extent feasible.

In general, Category B and C excavated materials stockpiles should not exceed 500 cubic yards, shall be located at least 100 feet from any wetlands or other tributaries, and shall be surrounded by appropriate siltation controls to prevent potential run-off. Larger stockpiles may be approved after consultation with the LSP-of-record. The stockpile shall not be placed on or directly upgradient of any drainage catch-basins, manholes, drainage swales, or other potential discharge pathways. The siltation control measures shall be secured at all times and shall be adequately monitored until the soil is removed from the Site and transported to at an approved facility. Category B and C soil shall be stockpiled on a minimum of two (2) layers of 6-mil polyethylene sheeting and covered with a minimum of one (1) layer of 6-mil polyethylene sheeting at the end of the workday. No regulated soils will be stockpiled on-Site for greater than 120 days without prior approval from the LSP-of -Record.

The following are the stockpiling procedures for each soil Category:

- Category A: This category broadly includes previously imported fill materials comprising the installed protective cap. This material should not be removed from the Property without consultation with an LSP. Stockpiles of this material may exceed 500 cubic yards and no polyethene sheeting is required to encapsulate the stockpile.

- Category B: This soil is not regulated under the MCP so long as it remains on-site but is intended for potential off-site disposal/reuse due to some other factor. This soil requires proper management to ensure that a reportable condition, as defined in the MCP, is not created. This soil may include urban fill, ash, peat, and sand. Any of this soil that is stockpiled shall be covered with 6-mil poly at the end of each day and remain covered until it has been properly characterized for disposal parameters. This material should not be removed from the Property without consultation with an LSP.

- Category C: This soil is regulated under the MCP and requires proper management. This is the soil that originates within a Disposal Site boundary and may be subject an AUL. This soil may not be reused at another Disposal Site on the Property without characterization and not within three feet of a final grade. Any of this soil that is stockpiled shall be covered with 6-mil poly at the end of each day and remain covered until it has been properly characterized for disposal parameters. This material should not be removed from the Property or reused without consultation with an LSP.

### 3.4 Field Screening

Soil being excavated from within a Disposal Site Boundary on the Property should be screened utilizing a photoionization detector (PID) for total organic vapors (TOVs). The PID should be calibrated to an isobutylene standard, and the frequency of screening should be no less than 1 sample for every 50 cubic yards of soil. Soil exhibiting PID readings of greater than or equal to 5 parts per million by volume (ppmv), and/or exhibiting visual or olfactory signs of contamination (staining/odors), should be segregated and should not be reused on the Property.

Soils will also be visually screened for other evidence of contamination (staining, sheens, free product).

In the event that excavated or sampled material has visible stains or unnatural odor, or if potentially contaminated and/or hazardous material is encountered, work will be stopped until the LSP and/or LSP representative has been notified.

## 3.5 SOIL CHARACTERIZATION

Should it be determined that any soils from the Property (regardless of disposal category) are to be removed from the Property, the soil must be characterized for disposal by collecting representative soil samples. The soil will be sampled and analyzed under the direction of the LSP. The sampling procedures and analytical parameters will be based upon the requirements of the facility to which it will be transported to for reuse, recycling, treatment and/or disposed. The number of samples and analyses will depend on the facility. The soil samples will be placed in the appropriate glassware with preservative (if applicable) and then submitted to a laboratory, on ice and under a chain of custody for analyses. The selected facility shall be contacted prior to characterizing the soil to ensure the adequate number of samples are collected and the appropriate analyses are performed.

Soil characterization samples may be collected and screened from excavated stockpiles or in-situ. Sample depth intervals and location(s) will be included in the field notes. A minimum of five representative grab samples may be composited for appropriate analyses. However, volatile organic compounds (VOCs) will be grab samples and taken from biased-high soils exhibited from field screening results using a PID. Stockpile characterization samples will be typically collected for at least every 500 cubic yards of excavated materials designated for off-site disposal or Category B soil designated for reuse. However, the sampling frequency may be adjusted by the LSP, based upon professional judgement, regulatory guidance, and the requirements of the disposal facility.

Soil characterization methodology will require the samples will be a minimum 5-point composite and the top 12-inches of the sampling location will be removed prior to sampling. Waste characterization samples may be analyzed for total petroleum hydrocarbons (TPH), VOCs, semi-volatile VOCs (SVOCs), polycyclic aromatic hydrocarbons (PAHs), conductivity, flashpoint, pH, reactive sulfide, reactive cyanide, polychlorinated biphenyls (PCBs), and/or Resource Conservation and Recovery Act (RCRA) 8 metals with/without toxicity characteristic leaching procedure (TCLP) analysis to accommodate analytical disposal criteria of the utilized offsite facilities.

## 4.0 DUST, ODOR, VAPOR CONTROLS

Significant odors, vapors, and/or dust are not anticipated. The Contractor will be responsible for evaluating conditions at the Property during soil management activity. The LSP may not be continuously present during soil management, but the LSP and/or his designee will conduct periodic inspections throughout the duration of the work.

During the construction activities, evaluation will be performed to identify conditions where dust becomes visible at the perimeter of the area of work. Throughout the duration of the work, dust control shall be performed as necessary to ensure that no visible or nuisance dust is allowed to migrate from the work area, areas of exposed soils, and/or stockpiles. Dust monitoring will consist of visual monitoring on an on-going basis. If dust is generated by the excavation activities and dust control is warranted, it will consist of spraying water, wetting the soils and/or the excavator bucket, or other feasible means. Spraying shall not introduce excessive moisture to the soils or produce runoff. Water supplied will be free of any contaminants. For excavation of soils with known concentrations of PCBs, the LSP should be consulted to determine if quantitative dust monitoring is required.

If these mitigating actions are inadequate to control airborne particulates, alternative control measure will be evaluated by the LSP and/or LSP's representative for implementation across the Property.

## 5.0 DECONTAMINATION

Prior to exiting the Property, vehicles and equipment will be brushed of visible soils and tires will be adequately cleaned to prevent tracking materials offsite, where appropriate.

Additional decontamination efforts at the Property may be deemed necessary by the LSP and/or LSP representative if OHM-impacted soils are exposed during excavation activities. Decontamination procedures will vary based upon the location and nature of the activity and must comply with state and federal regulations.

# FIGURES

Civil & Environmental Consultants, Inc.

31 Bellows Road
Raynham, MA 02767

Ph: 774.501.2176

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MASSACHUSETTS CLEAN ENERGY CENTER
FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
NEW BEDFORD, MASSACHUSETTS

SITE LOCUS MAP

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | FIGURE NO.: | 1 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=4,000' | PROJECT NO: | 332-344 | | |

P:\330-000\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-Site Locus.dwg[FIGURE 1] LS:(3/6/2025 - abucco) - LP: 3/19/2025 4:06 PM

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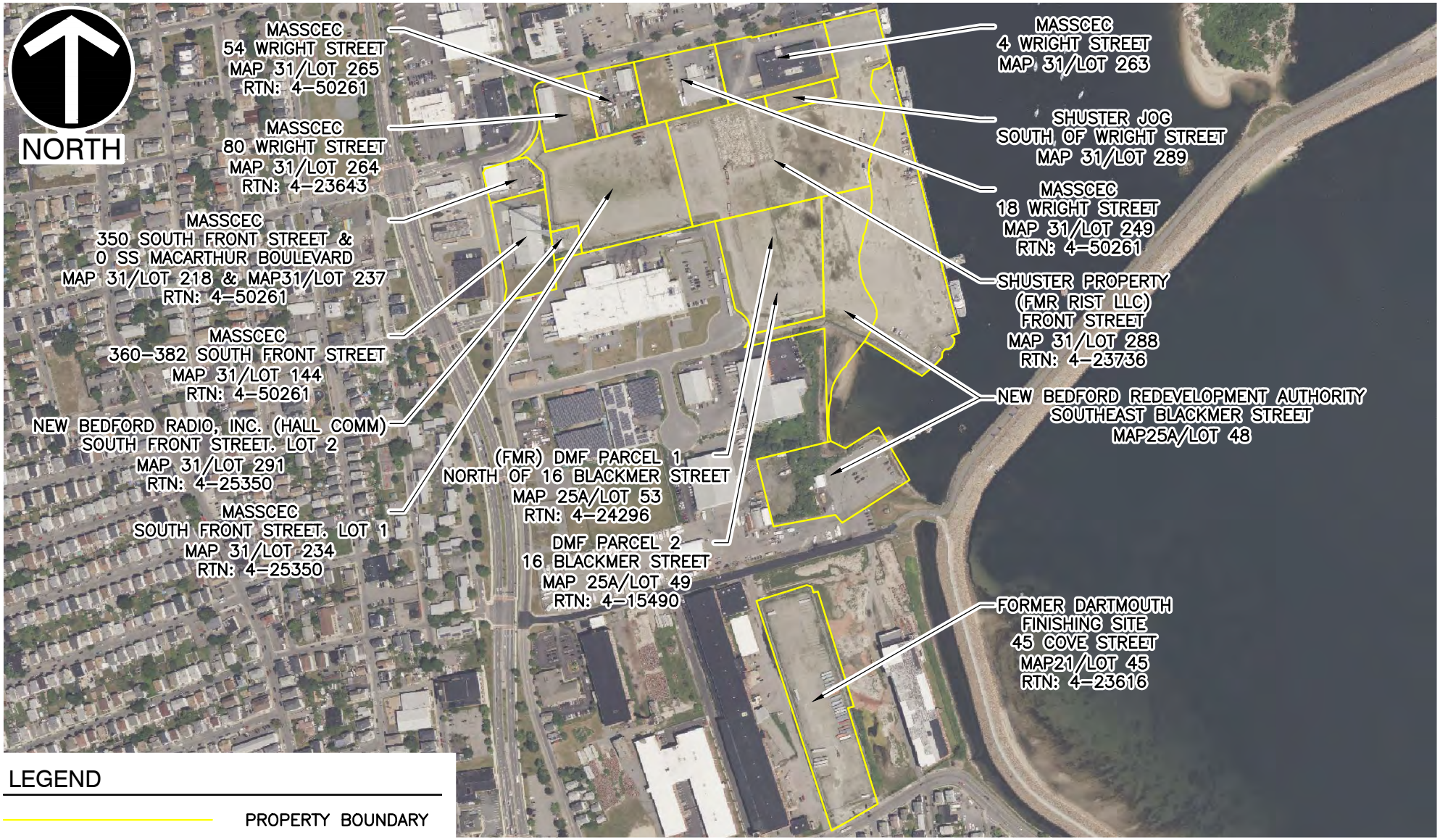


LEGEND

PROPERTY BOUNDARY

SCALE IN FEET

0 500 1,000


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NBMCT PARCEL OVERVIEW MAP

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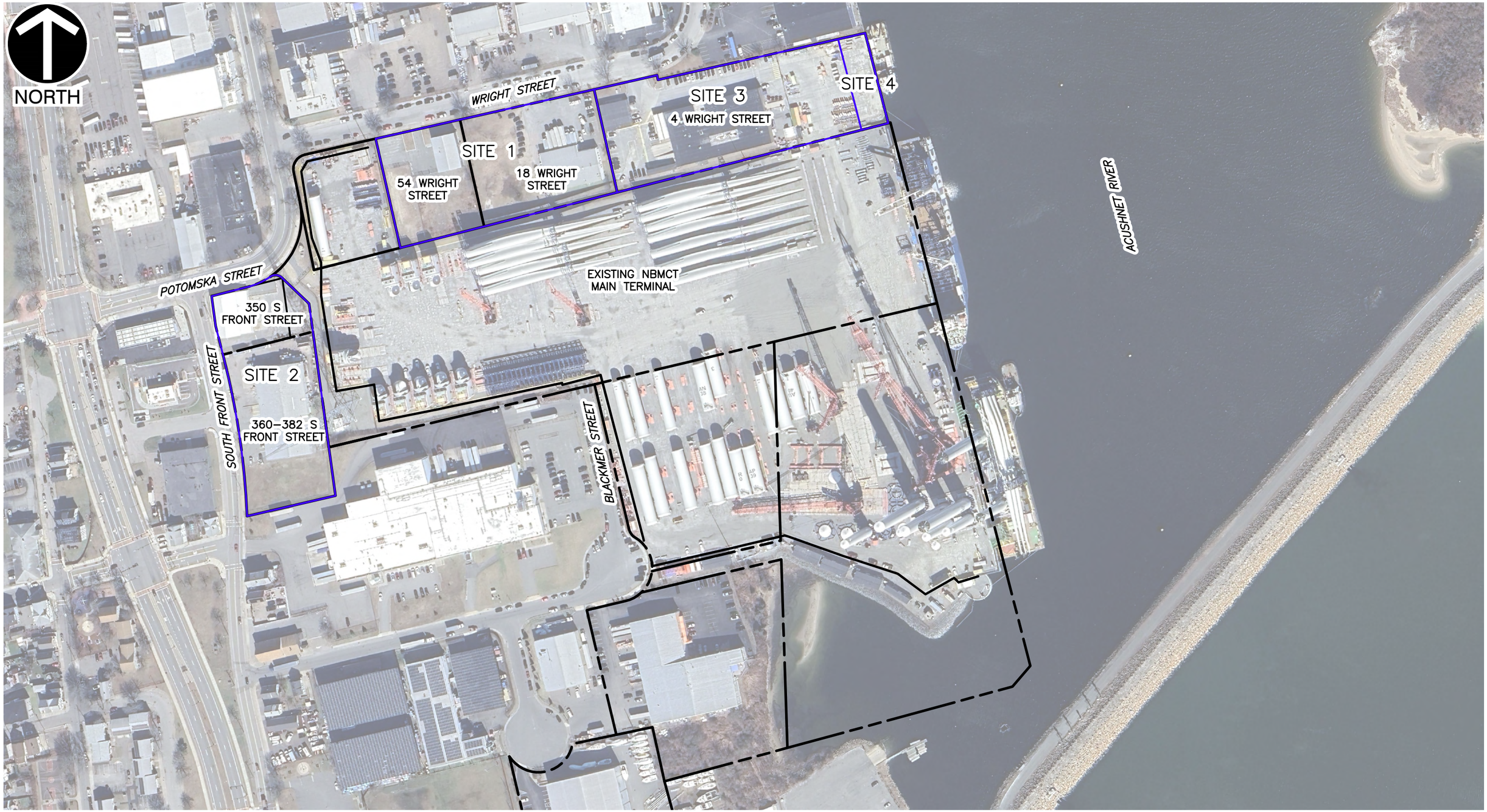
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | FIGURE NO.: | 2 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=500' | PROJECT NO: | 332-344 | | |




## LEGEND

- PROPOSED EXPANSION AREA
- PROPERTY LINE

SCALE IN FEET

0 200 400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NBMCT TERMINAL EXPANSION
"SITE" BOUNDARY MAP

| | | | | | | |
|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | FIGURE NO.: 3 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=200' | PROJECT NO: | 332-344 | |

P:\330-000\332-344\-CADD\Dwg\ENO4 - Soil Remediation\332344-ENO4-NBMCT Terminal Expansion Site Boundaries.dwg[FIGURE 3] LS:(3/12/2025 - abucco) - LP: 3/19/2025 4:09 PM

# EXHIBIT A
# ADEQUATELY REGULATED DETERMINATION

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection
One Winter Street Boston, MA 02108 • 617-292-5500

DEVAL L. PATRICK
Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

July 1, 2013

Bill White
Director, Offshore Wind Sector Development
Massachusetts Clean Energy Center
55 Summer Street, 9th Floor
Boston, MA 02110

Re: Adequately Regulated Determination for New Bedford Marine Commerce Terminal

Dear Mr. White:

I write in response to your June 24, 2013 letter requesting that the Massachusetts Department of Environmental Protection (MassDEP) determine that certain aspects of the New Bedford Marine Commerce Terminal project, also called the South Terminal project (the Project), be deemed "adequately regulated" under the provisions set forth in 310 CMR 40.0110 of the Massachusetts Contingency Plan (MCP).

310 CMR 40.0111 states, in pertinent part:

> The Department shall deem response actions at a disposal site subject to CERCLA adequately regulated for purposes of compliance with [the MCP], provided:
> (a) the Department concurs with the ROD and/or other EPA decisions for remedial actions at such site in accordance with 40 CFR 300.515(e); or,
> (b) if the Department requests that EPA change or expand the EPA-selected remedial action, EPA agrees to integrate the Department's proposed changes or expansions into the planned CERCLA remedial action in accordance with 40 CFR 300.515(f) [the State Enhanced Remedy provisions]….

Upon request by MassDEP, in its November 16, 2012 "Final Determination for the South Terminal Project" (Final Determination), EPA expanded the State Enhanced Remedy (SER), which is incorporated into the 1998 Record of Decision for the Upper and Lower Harbor at the New Bedford Harbor Superfund Site ("1998 ROD") so that it includes the South Terminal Project. MassDEP concurred with the 1998 ROD, as amended, and with the Final Determination.

Therefore, MassDEP determines that the Project is "adequately regulated" pursuant to 310 CMR 40.0111(a) and (b).

Also noted in your June 24, 2013 letter is EPA's requirement that remediation of the upland portion of the Project be conducted in accordance with M.G.L. Chapter 21E and the MCP. MassDEP acknowledges that certain investigation, remediation, and public involvement activities, apart from MCP requirements, are also specified in the Final Determination. Therefore, in the case of the upland portion of the Project, the "adequately regulated" status will eliminate the need to comply with MCP requirements that are duplicative of work already being required by EPA. However, MassDEP believes that the following activities are necessary to meet the requirements of Chapter 21E and the MCP for the upland portion of the Project, and that these activities would not be duplicative of other requirements contained in EPA's Final Determination:

- Use of the Bill of Lading Process (when Hazardous Waste Manifests are not required) in accordance with 310 CMR 40.0034;
- Reporting of any new or additional release conditions to MassDEP under the guidelines and timetables under Subpart C of the MCP;
- Meeting the Response Action Performance Standard as outlined within 310 CMR 40.0191;
- Utilizing MCP cleanup standards and/or risk-based cleanup standards generated via a Method 3 risk assessment to determine compliance with MCP performance standards under Subpart I of the MCP;
- Submittal of Release Abatement Measure (RAM) Plan, status reports and completion report pursuant to 310 CMR 40.0440;
- Preparation of a risk assessment for the Site(s) under Subpart I of the MCP;
- Preparation of Activity and Use Limitations under Subpart J of the MCP; and
- Preparation of Class A or Class B Response Action Outcomes for outstanding Release Tracking Numbers (RTNs) under Subpart J of the MCP.

Please let me know if you have any questions about this. You may reach me at (617) 556-1121 or Benjamin.Ericson@state.ma.us.

Sincerely,

Benjamin J. Ericson
Assistant Commissioner for Waste Site Cleanup

Cc: Phil Weinberg, Regional Director of MassDEP SERO
Millie Garcia-Serrano, Deputy Regional Director, MassDEP SERO
Paul Craffey, BWSC, State Enhanced Remedy Oversight Coordinator

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June 24, 2013

Mr. Benjamin J. Ericson
Assistant Commissioner for Waste Site Cleanup
Massachusetts Department of Environmental Protection
One Winter Street
Boston, MA 02108

Re: Adequately Regulated Determination

Dear Assistant Commissioner Ericson,

I write this letter on behalf of the Massachusetts Clean Energy Center ("CEC"), the project proponent for the development of the New Bedford Marine Commerce Terminal ("Terminal"), requesting that the Massachusetts Department of Environmental Protection ("DEP") issue a determination that certain aspects of the environmental investigation, remediation, and public involvement activities associated with the Terminal project be deemed adequately regulated under the Adequately Regulated provisions set forth in the Massachusetts Contingency Plan ("MCP") at 310 CMR 40.0110. As you know, the Terminal project is being constructed under the direction of the USEPA, by virtue of the State Enhanced Remedy provision of the New Bedford Harbor Superfund Site Record of Decision, and the Final Determination for the South Terminal Project, dated November 16, 2012.[1] While crafting the Final Determination, EPA:

- reviewed historic data associated with previous uses of some of the properties involved in the project;
- reviewed historic environmental investigations conducted to date on some of the properties involved in the project;
- directed the Commonwealth to conduct environmental investigations on certain properties associated with the project;
- requested proposals for environmental remediation on certain properties associated with the project, and reviewed and accepted those proposals;
- requested commitments from the Commonwealth with regard to future maintenance of existing asphalt surfaces on certain properties associated with the project; and

[1] The Final Determination can be found on the Executive Office of Energy and Environmental Affairs website at http://www.mass.gov/eea/ocean-coastal-management/serth/.

- required the commitment of the Commonwealth to conduct a public involvement process to ensure communication with the public regarding EPA's decisions and actions, as well as the progress of work in association with the project.

According to the Adequately Regulated provisions set forth at 310 CMR 40.0110, DEP shall deem response actions at a disposal site subject to CERCLA adequately regulated for purposes of compliance with 310 CMR 40.0000, if DEP concurs with the ROD and/or other EPA decisions for remedial actions at such site in accordance with 40 CFR 300.515(e). CEC maintains that DEP's issuance of its Applicable or Relevant and Appropriate Requirements ("ARAR) in connection with the Terminal project constitutes the requisite concurrence of the Final Determination issued by EPA on November 12, 2012, so as to constitute "other EPA decision[] for remedial action" under 310 CMR 40.0111(1)(a).

Notwithstanding the foregoing, CEC recognizes that EPA has indicated that sampling and remediation are to take place as part of the 21E/MCP process. CEC also concedes that the Final Determination does not clearly identify a cleanup standard for the work proposed for the Terminal; and that, DEP's ARAR that it submitted in relation to the Final Determination contemplated that CEC would undertake a detailed site assessment and implement an appropriate response action under the MCP.

However, it is equally important to note that EPA has directly regulated environmental investigation and proposed remediation for this project to date. EPA has also taken an active role in regulating the investigation and proposed remediation for the project, and that some aspects of the 21E/MCP process have already been reviewed and regulated by EPA. More importantly, various elements of CEC's appropriate response actions are already contemplated in the Final Determination. In light of these considerations, CEC requests that MassDEP specifically deem the following actions taken to date (or specifically approved by EPA to date) as Adequately Regulated:

- Onsite investigation conducted to date (unless previously conducted under the MCP by others);

- Onsite investigations as outlined within the Commonwealth's Sampling and Analysis Plan submitted to EPA, dated March 21, 2013 (or the final revision of such plan);

- Remediation as currently outlined within the Commonwealth's January 18, 2012 submission to USEPA and approved by EPA within its Final Determination for the South Terminal Project, dated November 16, 2012 (which has been publicly available since July of 2012 on the EEA website);

- Mitigation measures as currently outlined within the USEPA Final Determination for the South Terminal Project, dated November 16, 2012;

- Intensive public engagement, including 9 public meetings and numerous meeting with local environmental groups, in association with the project; and

- Timetables for document submission MCP compliance.

Implementation of ARARs associated with 21E/MCP compliance would involve:

- Use of the Bill of Lading Process (when Hazardous Waste Manifests are not required) in accordance with 310 CMR 40.0034;
- Reporting of any new or additional release conditions to MassDEP under the guidelines and timetables under Subpart C of the MCP;
- Meeting the Response Action Performance Standard as outlined within 310 CMR 40.0191;
- Utilizing MCP cleanup standards and/or risk-based cleanup standards generated via a Method 3 risk assessment to determine compliance with MCP performance standards under Subpart I of the MCP;
- Submittal of Release Abatement Measure (RAM) Plan, status updates and completion report pursuant to 310 CMR 40.0440;
- Preparation of a risk assessment for the Site(s) under Subpart I of the MCP;
- Preparation of Activity and Use Limitations under Subpart J of the MCP; and
- Preparation of Class A or Class B Response Action Outcomes for outstanding RTNs under Subpart J of the MCP.

Finally, CEC commits to completing and submitting the associated paperwork for the above-referenced activities within 120 days of the completion of the construction of the Terminal.

MassCEC sincerely appreciates your consideration of this very important matter. If you have any questions, please do not hesitate to contact me at 617-315-9330.

Sincerely,

*Bill White*

Bill White
Director, Offshore Wind Sector Development

**EXHIBIT B**
**FIGURES AND TABLES BY CEC AND OTHERS**

# MassDEP - Bureau of Waste Site Cleanup

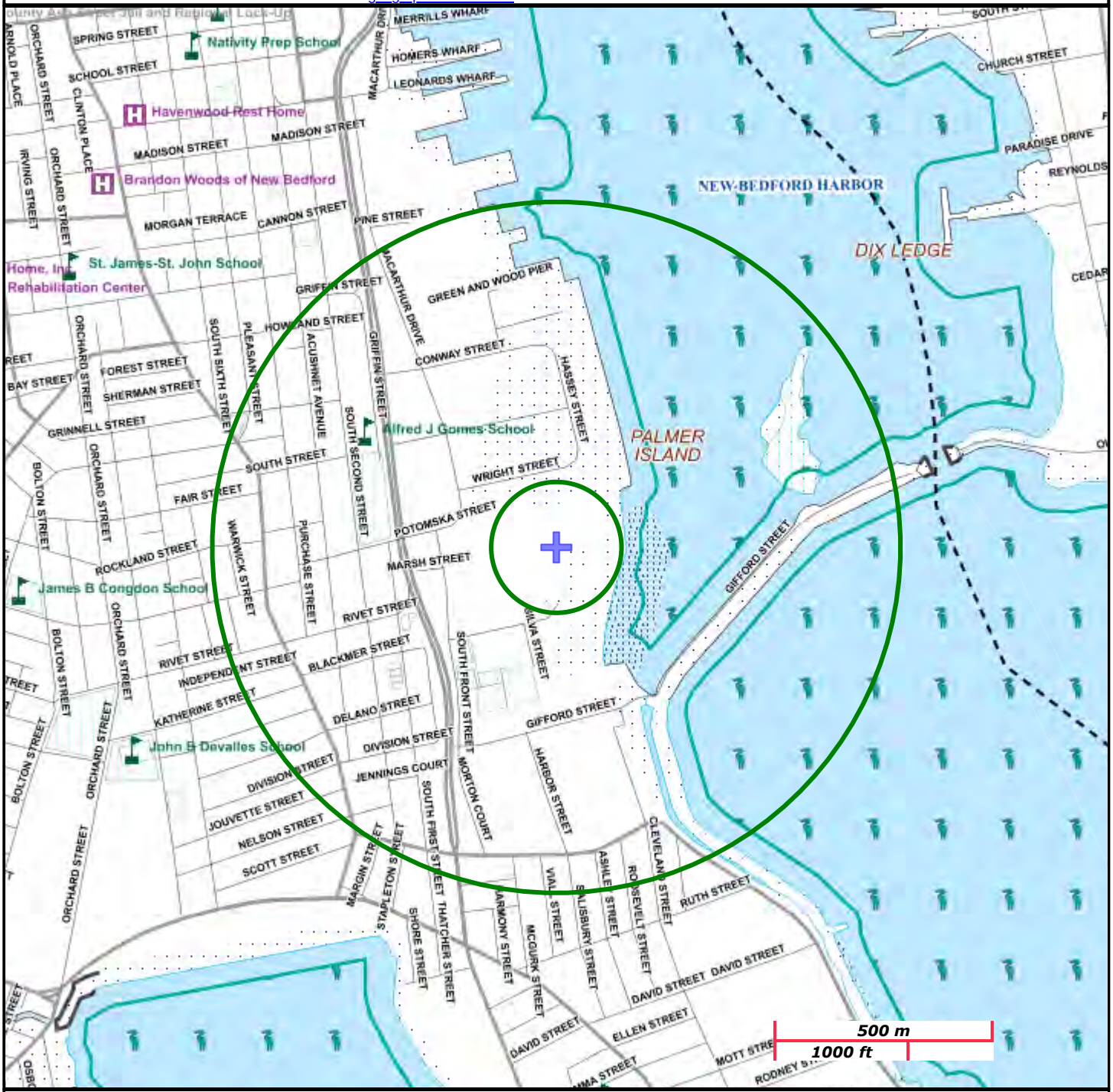
## Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

**Site Information:**
NBMCT
80 WRIGHT STREET NEW BEDFORD, MA

**NAD83 UTM Meters:**
4609654mN , 340334mE (Zone: 19)
September 28, 2022

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at: https://www.mass.gov/orgs/massgis-bureau-of-geographic-information.

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection




Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

NHESP Pri-Hab of Rare Species; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com.GW,SW, Emerg., Non-Com.

**EXHIBIT B**
**FIGURES BY CEC**

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Raynham, MA 02767

Ph: 774.501.2176

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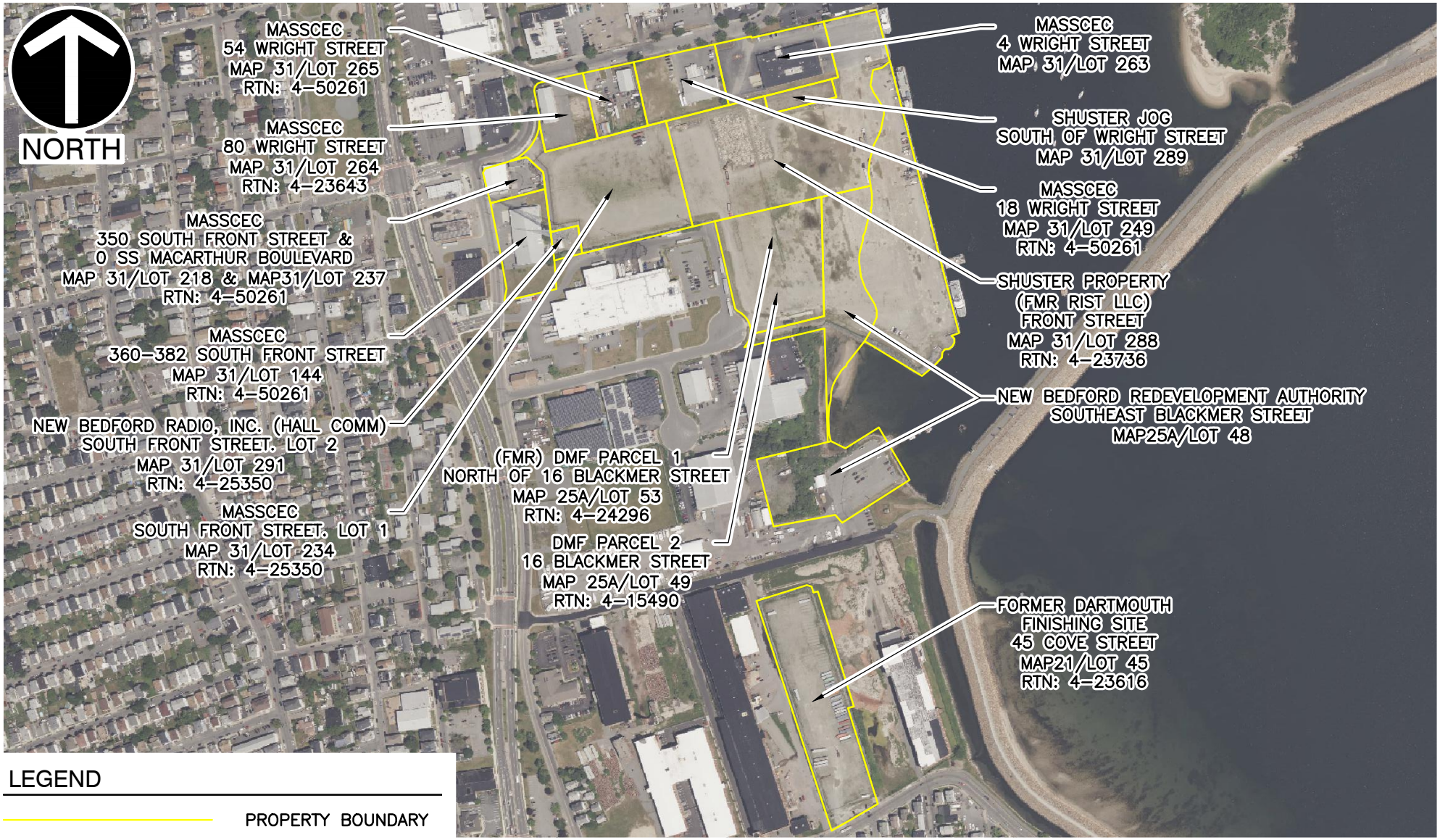
FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
NEW BEDFORD, MASSACHUSETTS

SITE LOCUS MAP

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | FIGURE NO.: | 1 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=4,000' | PROJECT NO: | 332-344 | | |

P:\330-000\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-Site Locus.dwg[FIGURE 1] LS:(3/6/2025 - abucco) - LP: 3/19/2025 4:06 PM

P:\330-000\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-Release Abatement.dwg{FIGURE 2} LS:(3/19/2025 - abucco) - LP: 3/31/2025 8:35 AM




LEGEND

PROPERTY BOUNDARY

SCALE IN FEET

0 500 1,000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FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
NEW BEDFORD, MASSACHUSETTS

NBMCT PARCEL OVERVIEW MAP

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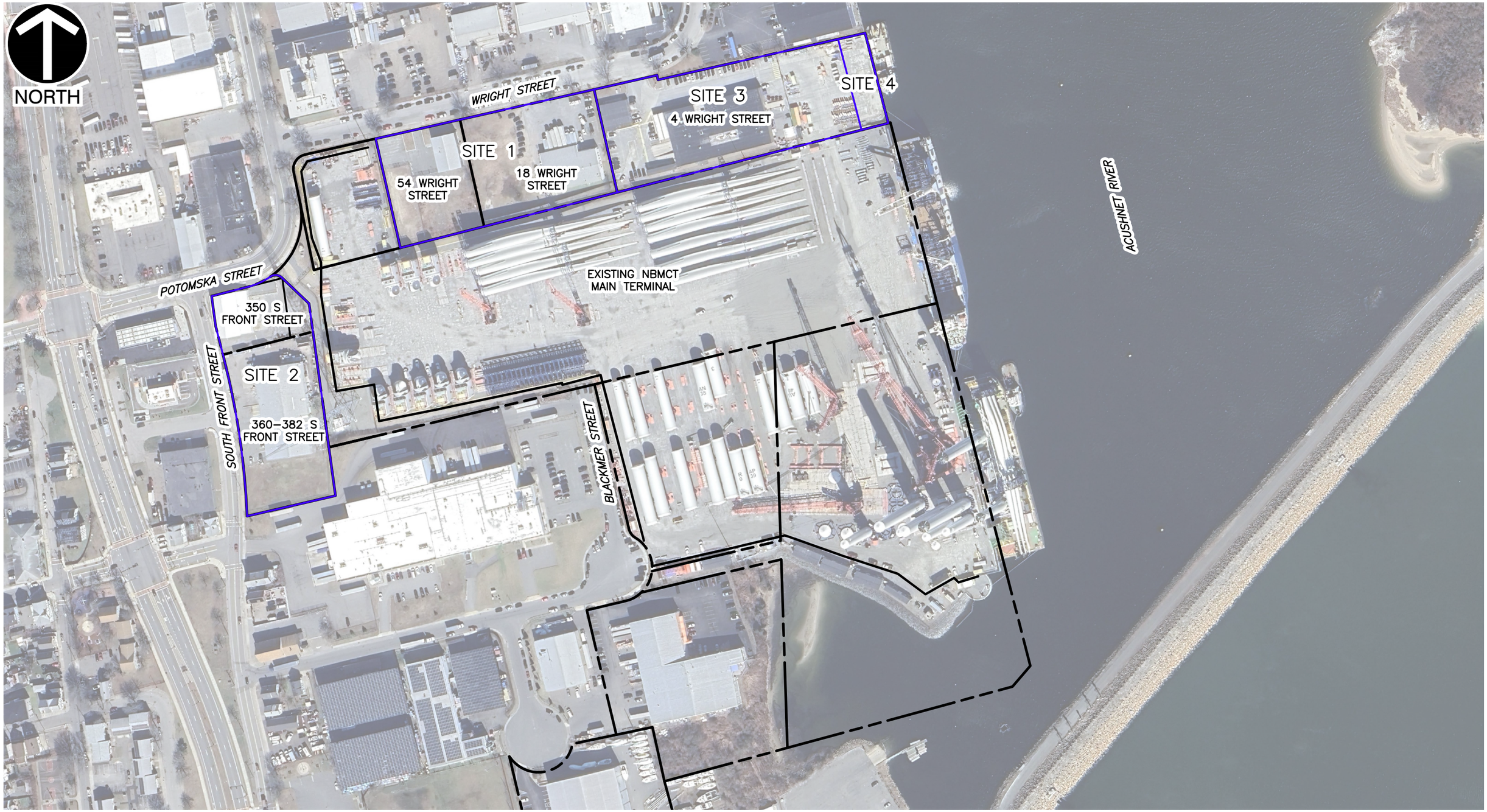
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | FIGURE NO.: | 2 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=500' | PROJECT NO: | 332-344 | | |




LEGEND

PROPOSED EXPANSION AREA

PROPERTY LINE

SCALE IN FEET

0 200 400

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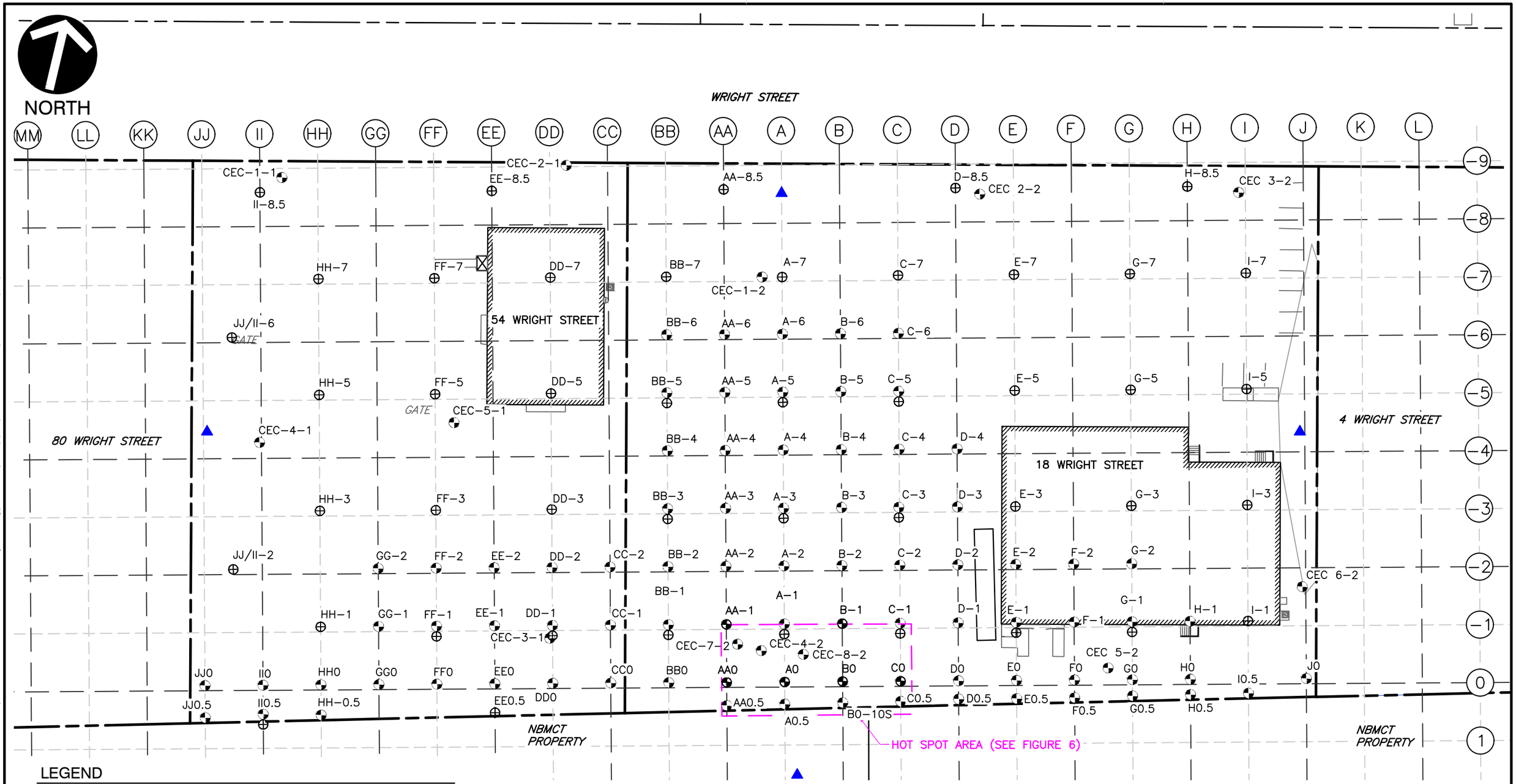
FOTH INFRASTRUCTURE & ENVIRONMENT, LLC
NEW BEDFORD, MASSACHUSETTS

NBMCT TERMINAL EXPANSION
"SITE" BOUNDARY MAP

| | | | | | | |
|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | FIGURE NO.: 3 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=200' | PROJECT NO: | 332-344 | |

P:\330-000\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-NBMCT Terminal Expansion Site Boundaries.dwg[FIGURE 3] LS:(3/12/2025 - abucco) - LP: 3/19/2025 4:09 PM




## LEGEND

| | |
|---|---|
| ⊕ AA–0 | SOIL BORING LOCATION – PCB ANALYSIS – DECEMBER 2023 THROUGH MAY 2024 |
| ⊕ AA–0 | SOIL BORING LOCATION – WASTE CHARACTERIZATION ANALYSIS – APRIL 2024 THROUGH MAY 2024 |
| ⊕ CEC–0–0 | SOIL BORING LOCATION PCB, MCP METALS, & SVOC ANALYSIS – NOVEMBER 2024 THROUGH DECEMBER 2024 |
| ——— | EXISTING PROPERTY LINE |
| ▲ | PROPOSED AIR/DUST MONITORING LOCATION |
| — — — | 50'x50' GRID SPACING |
| - - - - | 25'x25' GRID SPACING |

SCALE IN FEET

0 40 80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NEW BEDFORD, MASSACHUSETTS

SITE 1 BORING LOCATION PLAN AND SAMPLING GRID

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | EXHIBIT: | 4 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=40' | PROJECT NO: | 332-344 | | |

P:\330-000\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-Soil Remediation Figures.dwg[FIGURE 4] LS:(3/12/2025 - abucco) - LP: 3/19/2025 4:18 PM

WRIGHT STREET

NORTH

80 WRIGHT STREET

54 WRIGHT STREET

18 WRIGHT STREET

4 WRIGHT STREET

NBMCT PROPERTY

NBMCT PROPERTY

HOT SPOT AREA (SEE FIGURE 6)

## LEGEND

| | |
|---|---|
| AA–0 | SOIL BORING LOCATION – PCB ANALYSIS – DECEMBER 2023 THROUGH MAY 2024 |
| ⊕ AA–0 | SOIL BORING LOCATION – WASTE CHARACTERIZATION ANALYSIS – APRIL 2024 THROUGH MAY 2024 |
| CEC–0–0 | SOIL BORING LOCATION PCB, MCP METALS, & SVOC ANALYSIS – NOVEMBER 2024 THROUGH DECEMBER 2024 |
| | EXISTING PROPERTY LINE |
| | 50'x50' GRID SPACING |
| | 25'x25' GRID SPACING |

DISCRETE SAMPLE DEPTH (FEET BELOW GROUND SURFACE)

| | RESULT |
|---|---|
| 0–1 | PCB RESULT <1MG/KG |
| 1–2 | PCB RESULT 1 ≤ 25MG/KG |
| 2–3 | PCB RESULT >25MG/KG |
| 3–4 | NO SAMPLE ANALYZED |
| 4–5 | |
| 5–10 | |

COMPOSITE SAMPLE DEPTH (FEET BELOW GROUND SURFACE)

| | RESULT |
|---|---|
| 0–5 | PCB COMPOSITE SAMPLE WITHIN THIS DEPTH RANGE |
| 5–10 | PCB COMPOSITE SAMPLE WITHIN THIS DEPTH RANGE |

SCALE IN FEET

0 40 80


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SITE 1 SOIL RESULTS - PCBS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | EXHIBIT: | 5 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=40' | PROJECT NO: | 332-344 | | |

P:\330-000\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-Soil Remediation Figures.dwg[FIGURE 5] LS:(3/12/2025 - abucco) - LP: 3/19/2025 4:18 PM

NORTH

A–1
B–1
C–1
25'
25'
5'
5'
A0–20N20W
A0–20N10W
CEC–7–2
CEC–4–2
B0–20N15W
B0–15N15W
CEC–8–2
B0–10N15W
B0–20N15E
B0–15N15E
B0–10N15E
B0–10N
B0–5N
AA0
A0–20W
A0–15W
A0–10W
A0–5W
A0
B0–20W
B0–15W
B0–10W
B0–5W
B0
B0–5E
B0–10E
B0–15E
B0–20E
C0
B0–5S
AA0.5
A0.5
B0–10S15W
B0–10S
B0–10S15E
C0.5

LEGEND

| | |
|---|---|
| AA–0 | SOIL BORING LOCATION – PCB ANALYSIS – DECEMBER 2023 THROUGH MAY 2024 |
| AA–0 | SOIL BORING LOCATION – WASTE CHARACTERIZATION ANALYSIS – APRIL 2024 THROUGH MAY 2024 |
| CEC–0–0 | SOIL BORING LOCATION PCB, MCP METALS, & SVOC ANALYSIS – NOVEMBER 2024 THROUGH DECEMBER 2024 |
| | EXISTING PROPERTY LINE |
| | 50'x50' GRID SPACING |
| | 25'x25' GRID SPACING |
| | 5'x5' GRID SPACING |

DISCRETE SAMPLE DEPTH (FEET BELOW GROUND SURFACE)

| | RESULT |
|---|---|
| 0–1 | PCB RESULT <1MG/KG |
| 1–2 | PCB RESULT 1 ≤ 25MG/KG |
| 2–3 | PCB RESULT >25MG/KG |
| 3–4 | NO SAMPLE ANALYZED |
| 4–5 | |
| 5–10 | |

COMPOSITE SAMPLE DEPTH (FEET BELOW GROUND SURFACE)

| | RESULT |
|---|---|
| 0–5 | PCB COMPOSITE SAMPLE WITHIN THIS DEPTH RANGE |
| 5–10 | PCB COMPOSITE SAMPLE WITHIN THIS DEPTH RANGE |

SCALE IN FEET
0 5 10


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SITE 1 HOT SPOT SOIL RESULTS - PCBS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | EXHIBIT: | 6 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=5' | PROJECT NO: | 332-344 | | |

P:\330-000\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-Soil Remediation Figures.dwg[FIGURE 6] LS:(3/12/2025 - abucco) - LP: 3/19/2025 5:04 PM

NORTH

WRIGHT STREET

MM LL KK JJ II HH GG FF EE DD CC BB AA A B C D E F G H I J K L

9 8 7 6 5 4 3 2 1 0 1

CEC-1-1 II-8.5 | CEC-2-1 EE-8.5 | AA-8.5 | D-8.5 CEC 2-2 | H-8.5 CEC 3-2

HH-7 FF-7 DD-7 BB-7 A-7 C-7 E-7 G-7 I-7

CEC-1-2

54 WRIGHT STREET

JJ/II-6 GATE | BB-6 AA-6 A-6 B-6 C-6

HH-5 FF-5 DD-5 BB-5 AA-5 A-5 B-5 C-5 E-5 G-5 I-5

GATE CEC-5-1

80 WRIGHT STREET

CEC-4-1

4 WRIGHT STREET

BB-4 AA-4 A-4 B-4 C-4 D-4

18 WRIGHT STREET

HH-3 FF-3 DD-3 BB-3 AA-3 A-3 B-3 C-3 D-3 E-3 G-3 I-3

JJ/II-2 GG-2 FF-2 EE-2 DD-2 CC-2 BB-2 AA-2 A-2 B-2 C-2 D-2 E-2 F-2 G-2

CEC 6-2

BB-1 A-1

HH-1 GG-1 FF-1 EE-1 DD-1 CC-1 AA-1 B-1 C-1 D-1 E-1 F-1 G-1 H-1 I-1

CEC-3-1 CEC-7-2 CEC-4-2 CEC-8-2

CEC 5-2

JJ0 II0 HH0 GG0 FF0 EE0 CC0 BB0 AA0 A0 B0 C0 D0 E0 F0 G0 H0 I0.5 J0

JJ0.5 II0.5 HH-0.5 EE0.5 DD0 AA0.5 A0.5 B0-10S C0.5 D0.5 E0.5 F0.5 G0.5 H0.5

NBMCT PROPERTY

NBMCT PROPERTY

## LEGEND

| | |
|---|---|
| AA-0 | SOIL BORING LOCATION – PCB ANALYSIS – DECEMBER 2023 THROUGH MAY 2024 |
| AA-0 | SOIL BORING LOCATION – WASTE CHARACTERIZATION ANALYSIS – APRIL 2024 THROUGH MAY 2024 |
| CEC-0-0 | SOIL BORING LOCATION PCB, MCP METALS, & SVOC ANALYSIS – NOVEMBER 2024 THROUGH DECEMBER 2024 |
| | EXISTING PROPERTY LINE |
| | 50'x50' GRID SPACING |
| | 25'x25' GRID SPACING |
| | APPROXIMATE AREA OF LEAD CONCENTRATIONS >200 MG/KG |

SCALE IN FEET

0 40 80


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SITE 1 SOIL RESULTS - LEAD

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | EXHIBIT: | 7 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=40' | PROJECT NO: | 332-344 | | |

P:\330-0001\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-Soil Remediation Figures.dwg[FIGURE 7] LS:(3/12/2025 - abucco) - LP: 3/19/2025 4:21 PM

NORTH

WRIGHT STREET

EXISTING 30.00' DRAINAGE EASEMENT

EXISTING 30.00' DRAINAGE EASEMENT

Q–7 S–7 U–7 W–7 Y–7 C'–7 E'–7

A'–7

Y–5 A'–5 C'–5 E'–5

EXISTING BULKHEAD

K–4.5 L/M–4.5

K–3

18 WRIGHT STREET

4 WRIGHT STREET

Y–3 A'–3 C'–3 E'–3

Y–0.5

C'–1 E'–1

A'–1

K–1 L/M–1

O–0.5 Q–0.5 S–0.5 U–0.5 W–0.5

LO MO NO

NBMCT PROPERTY

SCALE IN FEET

0 50 100

## LEGEND

| | |
|---|---|
| AA–0 | SOIL BORING LOCATION – PCB ANALYSIS – JULY 2024 |
| – – – – – | 50'x50' GRID SPACING |
| – – – – – | 25'x25' GRID SPACING |


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SITE 3 BORING LOCATION PLAN AND SAMPLING GRID

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | EXHIBIT: | 8 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=50' | PROJECT NO: | 332-344 | | |

P:\330-000\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-Soil Remediation Figures.dwg[FIG8] LS:(3/19/2025 - abucco) - LP: 3/25/2025 1:13 PM

NORTH

WRIGHT STREET

EXISTING 30.00' DRAINAGE EASEMENT

EXISTING 30.00' DRAINAGE EASEMENT

Q–7 S–7 U–7 W–7 Y–7 C'–7 E'–7

A'–7

Y–5 A'–5 C'–5 E'–5

EXISTING BULKHEAD

K–4.5 L/M–4.5

K–3

18 WRIGHT STREET

4 WRIGHT STREET

Y–3 A'–3 C'–3 E'–3

Y–0.5

C'–1 E'–1

K–1 L/M–1

A'–1

O–0.5 Q–0.5 S–0.5 U–0.5 W–0.5

LO MO NO

NBMCT PROPERTY

SCALE IN FEET

0 50 100

## LEGEND

AA–0 — SOIL BORING LOCATION – PCB ANALYSIS – JULY 2024

50'x50' GRID SPACING

25'x25' GRID SPACING

DISCRETE SAMPLE DEPTH (FEET BELOW GROUND SURFACE)

| | RESULT |
|---|---|
| 0–1 | PCB RESULT <1MG/KG |
| 1–2 | PCB RESULT 1 ≤ 25MG/KG |
| 2–3 | PCB RESULT >25MG/KG |
| 3–4 | NO SAMPLE ANALYZED |
| 4–5 | |
| 5–10 | |

COMPOSITE SAMPLE DEPTH (FEET BELOW GROUND SURFACE)

| | RESULT |
|---|---|
| 0–5 | PCB COMPOSITE SAMPLE WITHIN THIS DEPTH RANGE |
| 5–10 | PCB COMPOSITE SAMPLE WITHIN THIS DEPTH RANGE |


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SITE 3 SOIL RESULTS - PCBS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | EXHIBIT: | 9 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=50' | PROJECT NO: | 332-344 | | |


P:\330-0001\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-Soil Remediation Figures.dwg[FIGURE 9] LS:(3/19/2025 - abucco) - LP: 3/25/2025 1:14 PM

NORTH

SOUTH FRONT STREET

CEC 5–4
CEC 6–4
CEC–7–4
CEC 1–4
CEC 4–3
CEC–8–3
350 SOUTH FRONT STREET
CEC–14–4
CEC–8–4
POTOMSKA STREET
360 SOUTH FRONT STREET
CEC–5–3
CEC 2–3
CEC–9–4
CEC–6–3
CEC–15–4
CEC 2–4
CEC–7–3
CEC–3–3
CEC–10–4
NBMCT PROPERTY

## LEGEND

CEC–11–4 — EXISTING SOIL BORING LOCATION – DECEMBER 2023 THROUGH SEPTEMBER 2024

50'x50' GRID SPACING

25'x25' GRID SPACING

SCALE IN FEET

0 40 80


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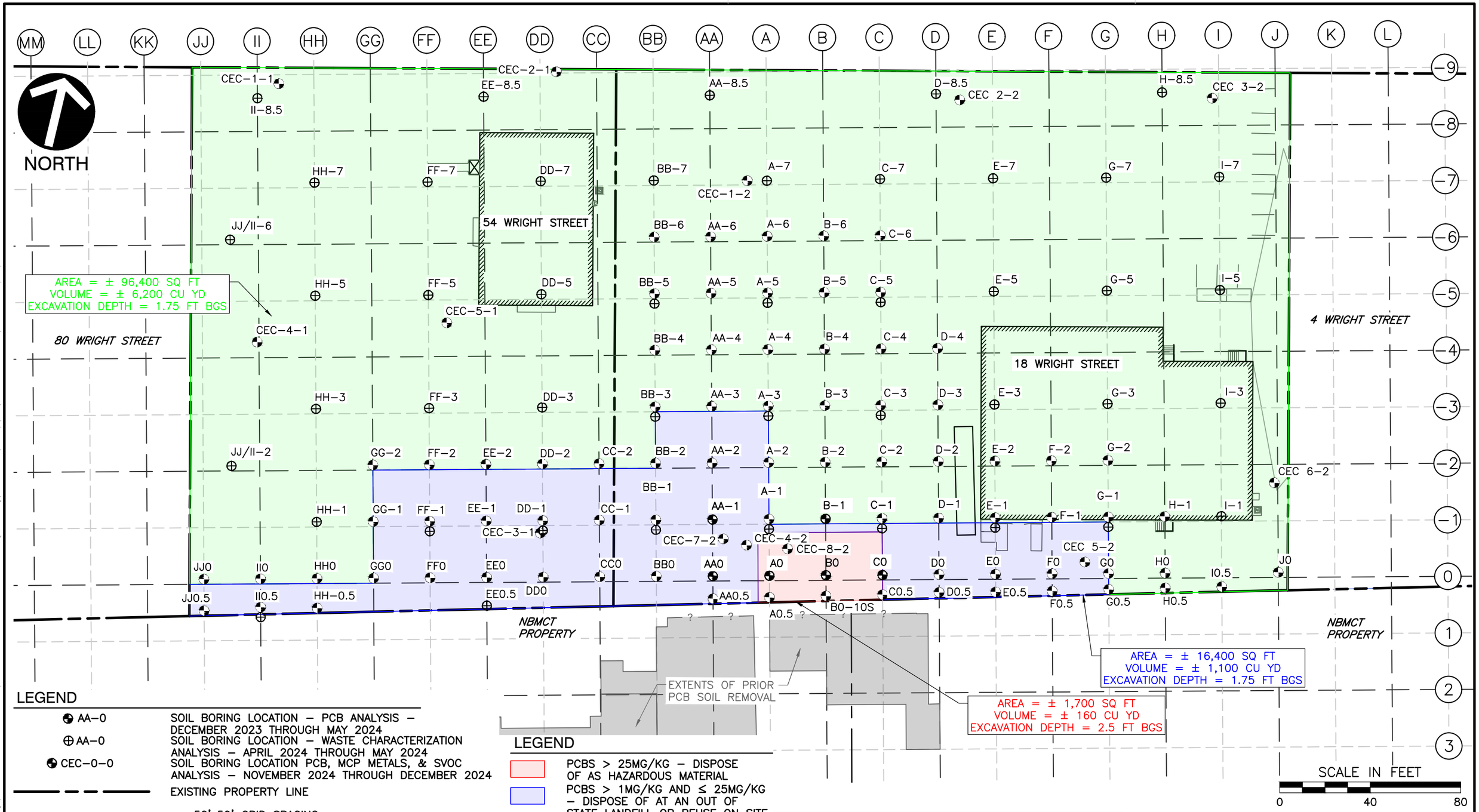
SITE 2 - BORING LOCATION PLAN AND SAMPLING GRID

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | EXHIBIT: | 10 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=40' | PROJECT NO: | 332-344 | | |

P:\330-000\332-344\-CADD\Dwg\EN06 - Site 2\332344-EN06-Site 2-Boring Location Plan.dwg[FIGURE 10] LS:(3/6/2025 - abucco) - LP: 3/19/2025 5:05 PM




## LEGEND

- AA–0 — SOIL BORING LOCATION – PCB ANALYSIS – DECEMBER 2023 THROUGH MAY 2024
- AA–0 — SOIL BORING LOCATION – WASTE CHARACTERIZATION ANALYSIS – APRIL 2024 THROUGH MAY 2024
- CEC–0–0 — SOIL BORING LOCATION PCB, MCP METALS, & SVOC ANALYSIS – NOVEMBER 2024 THROUGH DECEMBER 2024
- EXISTING PROPERTY LINE
- 50'x50' GRID SPACING
- 25'x25' GRID SPACING

DISCRETE SAMPLE DEPTH (FEET BELOW GROUND SURFACE)

| | RESULT |
|---|---|
| 0–1 | PCB RESULT <1MG/KG |
| 1–2 | PCB RESULT 1 ≤ 25MG/KG |
| 2–3 | PCB RESULT >25MG/KG |
| 3–4 | NO SAMPLE ANALYZED |
| 4–5 | |
| 5–10 | |

## LEGEND

- PCBS > 25MG/KG – DISPOSE OF AS HAZARDOUS MATERIAL
- PCBS > 1MG/KG AND ≤ 25MG/KG – DISPOSE OF AT AN OUT OF STATE LANDFILL OR REUSE ON SITE
- PCBS < 1MG/KG – DISPOSE OF AT A COMM–97 LANDFILL OR REUSE ON SITE

COMPOSITE SAMPLE DEPTH (FEET BELOW GROUND SURFACE)

| | RESULT |
|---|---|
| 0–5 | PCB COMPOSITE SAMPLE WITHIN THIS DEPTH RANGE |
| 5–10 | PCB COMPOSITE SAMPLE WITHIN THIS DEPTH RANGE |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SITE 1 SOIL EXCAVATION CHARACTERIZATION AREAS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DRAWN BY: | AMB | CHECKED BY: | CDB | APPROVED BY: | JDK | EXHIBIT: | 11 |
| DATE: | MARCH 2025 | DWG SCALE: | 1"=40' | PROJECT NO: | 332-344 | | |

P:\330-000\332-344\-CADD\Dwg\EN04 - Soil Remediation\332344-EN04-Soil Remediation Figures.dwg{FIGURE 11} LS:(3/12/2025 - abucco) - LP: 3/19/2025 4:44 PM

**EXHIBIT B**
**TABLES BY CEC**

Table 1
Site 1 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **A-1** | **A-3** | **A-5** | **A-7** | **AA-8.5** | **B-1** | **B-2** | **B0** | **BB-1** | **BB-3** | **BB-5** | **BB-7** | **C-1** | **MCP Concentrations** | |
| Sample ID | A-1 | A-3 | A-5 | A-7 | **AA-8.5** | B-1 4-5 | B-2 2-3 | B0 3-4 | BB-1 | BB-3 | BB-5 | BB-7 | C-1 | | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 4-5 | 2-3 | 3-4 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 4/30/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 5/2/2024 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 24E0050-03 | 24E0050-02 | 24E0050-01 | 24E0050-05 | 24E0026-09 | 24E0051-15 | 24F0473-01 | 24E0814-06 | 24E0026-08 | 24E0026-07 | 24E0026-06 | 24E0026-05 | 24E0124-01 | | |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | | |
| Acetone | < 0.043 | < 0.048 | < 0.048 | < 0.060 | < 0.046 | -- | -- | -- | < 0.056 | < 0.049 | < 0.050 | < 0.047 | < 0.054 | 6 | 50 |
| Naphthalene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | -- | -- | -- | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 4 | 20 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | -- | -- | -- | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 0.05 | 6 |
| 2-Methylnaphthalene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 80 |
| Acenaphthylene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.48 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 2 | 10 |
| Anthracene | < 0.29 | 1.41 | < 0.28 | < 0.28 | 0.67 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 1000 | 3000 |
| Benzo(A)anthracene | 0.33 | 7.33 | 0.51 | < 0.28 | 2.38 | -- | -- | -- | 0.45 | 0.32 | 0.28 | < 0.28 | < 0.28 | 20 | 300 |
| Benzo(A)pyrene | 0.35 | 7.30 | 0.52 | < 0.28 | 2.33 | -- | -- | -- | 0.49 | 0.32 | 0.30 | < 0.28 | < 0.28 | 2 | 30 |
| Benzo(B)fluoranthene | < 0.29 | 6.25 | 0.39 | < 0.28 | 2.53 | -- | -- | -- | 0.52 | 0.35 | 0.29 | < 0.28 | < 0.28 | 20 | 300 |
| Benzo(g,h,i)Perylene | 0.45 | 4.44 | 0.37 | < 0.28 | 1.52 | -- | -- | -- | 0.36 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 1000 | 3000 |
| Benzo(K)fluoranthene | < 0.29 | 4.84 | 0.32 | < 0.28 | 0.97 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 1000 | 3000 |
| Bis (2-ethylhexyl) phthalate | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | 0.40 | 100 | 700 |
| Butylbenzylphthalate | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 100 | 1000 |
| Chrysene | 0.31 | 6.28 | 0.48 | < 0.28 | 2.27 | -- | -- | -- | 0.44 | 0.34 | 0.31 | < 0.28 | < 0.28 | 200 | 3000 |
| Di-n-octyl phthalate | < 0.57 | < 0.55 | < 0.56 | < 0.56 | < 0.55 | -- | -- | -- | < 0.56 | < 0.58 | < 0.55 | < 0.56 | < 0.55 | 1000 | 10000 |
| Dibenzo(A,H)anthracene | < 0.29 | 1.28 | < 0.28 | < 0.28 | 0.35 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 2 | 30 |
| Dibenzofuran | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 100 | 1000 |
| Fluoranthene | 0.69 | 10.00 | 0.92 | < 0.28 | 5.39 | -- | -- | -- | 0.87 | 0.60 | 0.50 | 0.42 | < 0.28 | 1000 | 3000 |
| Fluorene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 1000 | 3000 |
| Indeno (1,2,3-cd) pyrene | < 0.29 | 5.31 | 0.34 | < 0.28 | 1.46 | -- | -- | -- | 0.35 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 20 | 300 |
| Naphthalene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | -- | -- | -- | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 4 | 20 |
| Phenanthrene | 0.37 | 3.82 | 0.58 | < 0.28 | 2.83 | -- | -- | -- | 0.47 | 0.34 | 0.29 | < 0.28 | < 0.28 | 10 | 1000 |
| Pyrene | 0.64 | 9.49 | 1.07 | < 0.28 | 4.59 | -- | -- | -- | 0.74 | 0.54 | 0.51 | 0.40 | < 0.28 | 1000 | 3000 |
| **Total SVOCs** | 3.15 | 67.75 | 5.51 | 0 | 27.32 | -- | -- | -- | 4.70 | 2.82 | 2.48 | 0.82 | 0.40 | | -- |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | | |
| Hydrocarbon, Oil, Petroleum | 31.30 | 36.2 | 39.1 | 14 | 66.4 | -- | -- | -- | 42.5 D | 21.9 | 16.4 | 18.8 | < 11 | 1000 | 3000 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | | |
| 4,4'-DDD | < 0.003 | < 0.003 | < 0.003 | 0.008 | < 0.003 | -- | -- | -- | < 0.003 | < 0.0027 | < 0.0028 | < 0.0028 | < 0.0027 | 10 | 40 |
| BHC-alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | < 0.003 | < 0.0027 | < 0.0028 | < 0.0028 | < 0.0027 | 50 | 500 |
| Dieldrin | < 0.003 | 0.003 | 0.007 | < 0.003 | 0.003 | -- | -- | -- | < 0.003 | < 0.0027 | < 0.0028 | < 0.0028 | < 0.0027 | 0.09 | 0.6 |
| Endosulfan, beta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | < 0.003 | < 0.0027 | < 0.0028 | < 0.0028 | < 0.0027 | 0.5 | 1 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | | |
| Arsenic | 2.52 | 4.04 | 2.93 | 4.2 | 3.2 | -- | -- | -- | 2.36 | 2.84 | 2.75 | 2.74 | 3.84 | 20 | 20 |
| Barium | 10.6 | 63.4 | 21.0 | 37.5 | 21.8 | -- | -- | -- | 17.5 | 20.7 | 11.7 | 24 | 15.4 | 1000 | 3000 |
| Beryllium | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 100 | 200 |
| Cadmium | < 0.41 | 0.52 | < 0.38 | < 0.42 | < 0.4 | -- | -- | -- | < 0.39 | < 0.44 | < 0.42 | < 0.44 | < 0.41 | 80 | 80 |
| Chromium | 7.77 | 24.2 | 8.58 | 7.62 | 5.85 | -- | -- | -- | 10.6 | 10.1 | 8.38 | 4.85 | 13.2 | 100 | 200 |
| Lead | 15.8 | 164 | 72.7 | 105 | 125 | 46.3 | 57.3 | 64.5 | 34 | 39.3 | 20.6 | 96 | 53.3 | 200 | 600 |
| Mercury | 0.06 | 0.12 | 0.15 | 0.44 | 0.20 | -- | -- | -- | 0.08 | 0.13 | 0.08 | < 0.04 | < 0.04 | 20 | 40 |
| Nickel | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 700 | 1000 |
| Silver | < 0.41 | < 0.41 | < 0.38 | < 0.42 | < 0.4 | -- | -- | -- | < 0.39 | < 0.44 | < 0.42 | < 0.44 | < 0.41 | 100 | 200 |
| Vanadium | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 500 | 800 |
| Zinc | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 | 3000 |

Notes:
Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 1
Site 1 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **C-1** | **C-3** | **C-5** | **C-7** | **C0** | **CEC-1-1** | **CEC-1-1** | **CEC-1-2** | **CEC-2-1** | **CEC-2-1** | **CEC-2-2** | **CEC-3-1** | **CEC-3-2** | **MCP Concentrations** | |
| Sample ID | C-1 3-4 | C-3 | C-5 | C-7 | C0 4-5 | CEC-1-1 0-4 | CEC-1-1 8-9.5 | CEC-1-2 0-4 | CEC-2-1 0-4 | CEC-2-1 8.8-10 | CEC-2-2 0-4 | CEC-3-1 0-4 | CEC-3-2 0.3-4 | | |
| Sample Depth (feet) | 3-4 | 0-5 | 0-5 | 0-5 | 4-5 | 0-4 | 8-9.5 | 0-4 | 0-4 | 8.8-10 | 0-4 | 0-4 | 0.3-4 | | |
| Sample Date | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/1/2024 | 11/9/2023 | 11/9/2023 | 12/5/2023 | 11/9/2023 | 11/9/2023 | 12/6/2023 | 11/10/2023 | 12/6/2023 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 24F0155-01 | 24E0124-02 | 24E0124-03 | 24E0124-04 | 24E0050-09 | 23K0414-01 | 23K0414-02 | 23L0197-04 | 23K0414-05 | 23K0414-06 | 23L0197-12 | 23K0414-09 | 23L0197-11 | | |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | | |
| Acetone | -- | < 0.054 | < 0.049 | < 0.065 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 6 | 50 |
| Naphthalene | -- | < 0.005 | < 0.005 | < 0.007 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4 | 20 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | -- | < 0.03 | < 0.026 | < 0.026 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.05 | 6 |
| 2-Methylnaphthalene | -- | < 0.26 | < 0.26 | < 0.264 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.7 | 80 |
| Acenaphthylene | -- | < 0.26 | < 0.26 | < 0.264 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2 | 10 |
| Anthracene | -- | < 0.26 | < 0.26 | < 0.264 | -- | < 0.32 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 1000 | 3000 |
| Benzo(A)anthracene | -- | < 0.26 | < 0.26 | < 0.264 | -- | < 0.32 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 20 | 300 |
| Benzo(A)pyrene | -- | < 0.26 | < 0.26 | < 0.264 | -- | 0.37 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 2 | 30 |
| Benzo(B)fluoranthene | -- | < 0.26 | < 0.26 | < 0.264 | -- | 0.32 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 20 | 300 |
| Benzo(g,h,i)Perylene | -- | < 0.26 | < 0.26 | < 0.264 | -- | < 0.32 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 1000 | 3000 |
| Benzo(K)fluoranthene | -- | < 0.26 | < 0.26 | < 0.264 | -- | < 0.32 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 1000 | 3000 |
| Bis (2-ethylhexyl) phthalate | -- | < 0.26 | < 0.26 | < 0.264 | -- | < 0.32 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 100 | 700 |
| Butylbenzylphthalate | -- | < 0.26 | < 0.26 | < 0.264 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 100 | 1000 |
| Chrysene | -- | < 0.26 | < 0.26 | < 0.264 | -- | 0.34 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 200 | 3000 |
| Di-n-octyl phthalate | -- | < 0.52 | < 0.52 | < 0.528 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 | 10000 |
| Dibenzo(A,H)anthracene | -- | < 0.26 | < 0.26 | < 0.264 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2 | 30 |
| Dibenzofuran | -- | < 0.26 | < 0.26 | < 0.264 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 100 | 1000 |
| Fluoranthene | -- | < 0.26 | < 0.26 | < 0.264 | -- | 0.61 | < 1.33 | < 0.267 | < 0.32 | 0.43 | < 0.26 | < 0.30 | < 0.27 | 1000 | 3000 |
| Fluorene | -- | < 0.26 | < 0.26 | < 0.264 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 | 3000 |
| Indeno (1,2,3-cd) pyrene | -- | < 0.26 | < 0.26 | < 0.264 | -- | < 0.32 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 20 | 300 |
| Naphthalene | -- | < 0.26 | < 0.26 | < 0.264 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4 | 20 |
| Phenanthrene | -- | < 0.26 | < 0.26 | < 0.264 | -- | < 0.32 | < 1.33 | < 0.267 | < 0.32 | < 0.41 | < 0.26 | < 0.30 | < 0.27 | 10 | 1000 |
| Pyrene | -- | < 0.26 | < 0.26 | 0.319 | -- | 0.61 | < 1.33 | < 0.267 | < 0.32 | 0.50 | < 0.26 | 0.33 | < 0.27 | 1000 | 3000 |
| **Total SVOCs** | -- | 0 | 0 | 0.319 | -- | 2.25 | 0 | 0 | 0 | 0.92 | 0 | 1.134 | 0 | | -- |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | | |
| Hydrocarbon, Oil, Petroleum | -- | < 10.8 | 19.1 | < 10.8 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 | 3000 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | | |
| 4,4'-DDD | -- | < 0.0027 | < 0.0027 | < 0.0026 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 10 | 40 |
| BHC-alpha | -- | < 0.0027 | < 0.0027 | < 0.0026 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 50 | 500 |
| Dieldrin | -- | < 0.0027 | < 0.0027 | < 0.0026 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.09 | 0.6 |
| Endosulfan, beta | -- | < 0.0027 | < 0.0027 | < 0.0026 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.5 | 1 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | | |
| Arsenic | -- | 4.05 | 2.96 | 1.71 | -- | 4.51 | < 4.57 | < 2 | 2.59 | 3.26 | < 2.02 | < 1.9 | < 2.01 | 20 | 20 |
| Barium | -- | 14.1 | 15 | 9.04 | -- | 74.7 | 22.8 | 12 | 44.3 | 44.2 | 18.1 | 23.1 | 9.51 | 1000 | 3000 |
| Beryllium | -- | -- | -- | -- | -- | 0.25 | 0.28 | 0.21 | 0.24 | 0.42 | 0.22 | 0.17 | 0.29 | 100 | 200 |
| Cadmium | -- | < 0.36 | < 0.39 | < 0.4 | -- | < 0.46 | < 0.91 | < 0.4 | < 0.46 | 0.84 | < 0.4 | < 0.38 | < 0.4 | 80 | 80 |
| Chromium | -- | 6.84 | 5.88 | 4.11 | -- | 8.63 | 13.2 | 6.44 | 21.2 | 17.8 | 7.15 | 12.9 | 6.65 | 100 | 200 |
| Lead | 54.6 | 24.6 | 169 | 10.9 | 4210 D | 307 | 13.8 | 11.5 | 310 | 136 | 32 | 28.6 | 8.6 | 200 | 600 |
| Mercury | -- | < 0.04 | 0.035 | < 0.035 | -- | 1.9 D | < 0.16 | < 0.04 | < 0.04 | 1.17 D | 0.05 | 0.07 | 0.05 | 20 | 40 |
| Nickel | -- | -- | -- | -- | -- | 5.44 | 11 | 5.56 | 6.15 | 8.28 | 5.44 | 5.82 | 4.59 | 700 | 1000 |
| Silver | -- | < 0.36 | < 0.39 | < 0.4 | -- | < 0.46 | < 0.91 | < 0.4 | < 0.46 | < 0.62 | < 0.4 | < 0.38 | < 0.4 | 100 | 200 |
| Vanadium | -- | -- | -- | -- | -- | 10.6 | 28.1 | 9.65 | 14.4 | 17.9 | 9.97 | 9.31 | 7.4 | 500 | 800 |
| Zinc | -- | -- | -- | -- | -- | 101 | 17.2 | 23.1 | 76 | 68.6 | 26.2 | 41 | 18 | 1000 | 3000 |

Notes:
Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
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NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 1
Site 1 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **CEC-4-1** | **CEC-4-1** | **CEC-4-2** | **CEC-5-1** | **CEC-5-1** | **CEC-5-2** | **CEC-6-2** | **CEC-7-2** | **CEC-8-2** | **D-4** | **D-8.5** | **DD-1** | **DD-3** | **MCP Concentrations** | |
| Sample ID | CEC-4-1 0-4 | CEC-4-1 8-10 | CEC-4-2 0-4 | CEC-5-1 0-4 | CEC-5-1 8-10 | CEC-5-2 0-4 | CEC-6-2 0-4 | CEC-7-2 0-4 | CEC-8-2 2-4 | D-4 4-5 | D-8.5 | DD-1 | DD-3 | | |
| Sample Depth (feet) | 0-4 | 8-10 | 0-4 | 0-4 | 8-10 | 0-4 | 0-4 | 0-4 | 2-4 | 4-5 | 0-5 | 0-5 | 0-5 | | |
| Sample Date | 11/9/2023 | 11/9/2023 | 12/5/2023 | 11/10/2023 | 11/10/2023 | 12/6/2023 | 12/6/2023 | 12/5/2023 | 12/5/2023 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/30/2024 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 23K0414-03 | 23K0414-04 | 23L0197-05 | 23K0414-08 | 23K0414-07 | 23L0197-09 | 23L0197-10 | 23L0197-07 | 23L0197-02 | 24E0125-09 | 24E0124-05 | 24D1044-18 | 24E0026-03 | | |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | | |
| Acetone | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.063 | < 0.047 | < 0.045 | 6 | 50 |
| Naphthalene | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.006 | < 0.005 | < 0.005 | 4 | 20 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.03 | 0.03 | < 0.03 | 0.05 | 6 |
| 2-Methylnaphthalene | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.27 | < 0.29 | < 0.27 | 0.7 | 80 |
| Acenaphthylene | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.27 | < 0.29 | < 0.27 | 2 | 10 |
| Anthracene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 0.34 | < 0.28 | < 0.28 | < 0.28 | -- | < 0.27 | 0.53 | < 0.27 | 1000 | 3000 |
| Benzo(A)anthracene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 0.69 | < 0.28 | < 0.28 | 0.51 | -- | < 0.27 | 0.76 | < 0.27 | 20 | 300 |
| Benzo(A)pyrene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 0.60 | < 0.28 | < 0.28 | 0.49 | -- | < 0.27 | 0.69 | < 0.27 | 2 | 30 |
| Benzo(B)fluoranthene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 0.55 | < 0.28 | < 0.28 | 0.42 | -- | < 0.27 | 0.72 | < 0.27 | 20 | 300 |
| Benzo(g,h,i)Perylene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 0.34 | < 0.28 | < 0.28 | 0.34 | -- | < 0.27 | 0.41 | < 0.27 | 1000 | 3000 |
| Benzo(K)fluoranthene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 0.44 | < 0.28 | < 0.28 | 0.37 | -- | < 0.27 | 0.29 | < 0.27 | 1000 | 3000 |
| Bis (2-ethylhexyl) phthalate | < 0.27 | 0.35 | < 0.28 | < 0.26 | < 0.33 | < 0.27 | < 0.28 | < 0.28 | < 0.28 | -- | < 0.27 | < 0.29 | < 0.27 | 100 | 700 |
| Butylbenzylphthalate | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.27 | < 0.29 | < 0.27 | 100 | 1000 |
| Chrysene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 0.63 | < 0.28 | < 0.28 | 0.45 | -- | < 0.27 | 0.72 | < 0.27 | 200 | 3000 |
| Di-n-octyl phthalate | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.54 | < 0.58 | < 0.54 | 1000 | 10000 |
| Dibenzo(A,H)anthracene | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.27 | < 0.29 | < 0.27 | 2 | 30 |
| Dibenzofuran | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.27 | < 0.29 | < 0.27 | 100 | 1000 |
| Fluoranthene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 1.38 | < 0.28 | < 0.28 | 1.01 | -- | < 0.27 | 1.85 | < 0.27 | 1000 | 3000 |
| Fluorene | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.27 | < 0.29 | < 0.27 | 1000 | 3000 |
| Indeno (1,2,3-cd) pyrene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 0.37 | < 0.28 | < 0.28 | 0.33 | -- | < 0.27 | 0.40 | < 0.27 | 20 | 300 |
| Naphthalene | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.27 | < 0.29 | < 0.27 | 4 | 20 |
| Phenanthrene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 1.27 | < 0.28 | < 0.28 | 0.52 | -- | < 0.27 | 1.97 | < 0.27 | 10 | 1000 |
| Pyrene | < 0.27 | < 0.34 | < 0.28 | < 0.26 | < 0.33 | 1.26 | < 0.28 | < 0.28 | 0.89 | -- | < 0.27 | 1.51 | 0.27 | 1000 | 3000 |
| **Total SVOCs** | 0 | 0.35 | 0 | 0 | 0 | 7.86 | 0 | 0 | 5.34 | -- | 0 | 9.88 | 0.27 | | -- |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | | |
| Hydrocarbon, Oil, Petroleum | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 11.6 | 19.8 | 146 D | 1000 | 3000 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | | |
| 4,4'-DDD | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.0027 | < 0.0029 | < 0.0026 | 10 | 40 |
| BHC-alpha | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.0027 | < 0.0029 | < 0.0026 | 50 | 500 |
| Dieldrin | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.0027 | < 0.0029 | < 0.0026 | 0.09 | 0.6 |
| Endosulfan, beta | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | < 0.0027 | < 0.0029 | < 0.0026 | 0.5 | 1 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | | |
| Arsenic | < 2.02 | < 1.08 | < 2.08 | < 1.9 | 2.58 | < 1.91 | < 1.92 | < 2.13 | < 1.88 | -- | 1.77 | 7.09 | 2.35 | 20 | 20 |
| Barium | 11.9 | 5.87 | 8.36 | 17.7 | 60.4 | 19 | 15.9 | 9.95 | 20.5 | -- | 22.1 | 37.8 | 15.2 | 1000 | 3000 |
| Beryllium | 0.16 | 0.31 | 0.17 | 0.15 | 0.24 | 0.18 | 0.16 | 0.16 | 0.23 | -- | -- | -- | -- | 100 | 200 |
| Cadmium | < 0.4 | < 0.22 | < 0.42 | < 0.38 | < 0.49 | < 0.38 | < 0.38 | < 0.43 | < 0.38 | -- | < 0.43 | < 0.39 | < 0.37 | 80 | 80 |
| Chromium | 4.55 | 6.97 | 4.05 | 7.65 | 7.81 | 7.68 | 8.49 | 6.12 | 11.5 | -- | 4.17 | 23.3 | 10.8 | 100 | 200 |
| Lead | 16.3 | 4.16 | 7.64 | 5.94 | 15.4 | 52.6 | 30.9 | 15.2 | 49.7 | 411 | 73.8 | 76.2 | 19.5 | 200 | 600 |
| Mercury | < 0.03 | < 0.04 | < 0.03 | < 0.03 | 0.07 | < 0.03 | 0.11 | 0.03 | 0.09 | -- | 0.09 | 0.08 | 0.06 | 20 | 40 |
| Nickel | 4.11 | 3.62 | 3.7 | 5.66 | 4.18 | 4.81 | 5.04 | 4.02 | 7.02 | -- | -- | -- | -- | 700 | 1000 |
| Silver | < 0.4 | 0.43 | < 0.42 | < 0.38 | < 0.49 | < 0.38 | < 0.38 | < 0.43 | < 0.38 | -- | < 0.43 | < 0.39 | < 0.37 | 100 | 200 |
| Vanadium | 6.01 | 13.9 | 7.7 | 6.02 | 14.4 | 9.95 | 9.47 | 9.18 | 13 | -- | -- | -- | -- | 500 | 800 |
| Zinc | 73.1 | 55.2 | 14.9 | 15.2 | 18.9 | 36.9 | 24.4 | 21.9 | 47.3 | -- | -- | -- | -- | 1000 | 3000 |

Notes:
Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
D = identified in an analysis that has been diluted
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Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

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Site 1 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **DD-5** | **DD-7** | **E-1** | **E-1** | **E-1** | **E-1** | **E-1** | **E-2** | **E-3** | **E-3** | **E-5** | **E-7** | **E0** | **MCP Concentrations** | |
| Sample ID | DD-5 | DD-7 | E-1 | E-1 1-2 | E-1 2-3 | E-1 4-5 | E-1 9-10 | E-2 4-5 | E-3 0-3 | E-3 3-7 | E-5 | E-7 | **E-0 9-10** | | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-5 | 1-2 | 2-3 | 4-5 | 9-10 | 4-5 | 0-3 | 3-7 | 0-5 | 0-5 | 9-10 | | |
| Sample Date | 4/30/2024 | 4/30/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 6/21/2024 | 5/3/2024 | 5/3/2024 | 5/3/2024 | 5/2/2024 | 5/2/2024 | 6/21/2024 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 24E0026-02 | 24E0026-01 | 24E0124-08 | 24E0125-10 | 24E1060-01 | 24E0125-15 | 24F0929-08 | 24E0126-02 | 24E0124-16 | 24E0124-17 | 24E0124-07 | 24E0124-06 | 24F0927-01 | | |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | | |
| Acetone | < 0.051 | < 1.52 | < 0.053 | -- | -- | -- | -- | -- | < 0.066 | < 0.058 | < 0.060 | < 0.068 | -- | 6 | 50 |
| Naphthalene | < 0.005 | 0.857 | < 0.005 | -- | -- | -- | -- | -- | < 0.007 | < 0.006 | < 0.006 | < 0.007 | -- | 4 | 20 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | 0.08 | < 0.03 | -- | -- | -- | -- | -- | < 0.03 | < 0.03 | < 0.03 | < 0.03 | -- | 0.05 | 6 |
| 2-Methylnaphthalene | < 0.28 | 0.31 | < 0.29 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | < 0.28 | < 0.30 | -- | 0.7 | 80 |
| Acenaphthylene | < 0.28 | 0.75 | < 0.29 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | < 0.28 | < 0.30 | -- | 2 | 10 |
| Anthracene | < 0.28 | 0.60 | < 0.29 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | 0.44 | < 0.30 | -- | 1000 | 3000 |
| Benzo(A)anthracene | < 0.28 | 1.02 | 1.00 | -- | -- | -- | -- | -- | 0.29 | 0.33 | 1.29 | < 0.30 | -- | 20 | 300 |
| Benzo(A)pyrene | < 0.28 | 0.93 | 1.17 | -- | -- | -- | -- | -- | 0.32 | 0.36 | 1.21 | < 0.30 | -- | 2 | 30 |
| Benzo(B)fluoranthene | < 0.28 | 1.04 | 0.93 | -- | -- | -- | -- | -- | 0.36 | 0.37 | 0.92 | < 0.30 | -- | 20 | 300 |
| Benzo(g,h,i)Perylene | < 0.28 | 0.51 | 0.84 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | 0.75 | < 0.30 | -- | 1000 | 3000 |
| Benzo(K)fluoranthene | < 0.28 | 0.41 | 0.85 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | 0.90 | < 0.30 | -- | 1000 | 3000 |
| Bis (2-ethylhexyl) phthalate | < 0.28 | < 0.27 | < 0.29 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | < 0.28 | < 0.30 | -- | 100 | 700 |
| Butylbenzylphthalate | < 0.28 | < 0.27 | 0.39 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | < 0.28 | < 0.30 | -- | 100 | 1000 |
| Chrysene | < 0.28 | 1.02 | 0.93 | -- | -- | -- | -- | -- | 0.32 | 0.32 | 1.20 | < 0.30 | -- | 200 | 3000 |
| Di-n-octyl phthalate | < 0.56 | < 0.54 | < 0.57 | -- | -- | -- | -- | -- | < 0.53 | < 0.50 | < 0.57 | < 0.60 | -- | 1000 | 10000 |
| Dibenzo(A,H)anthracene | < 0.28 | < 0.27 | < 0.29 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | < 0.28 | < 0.30 | -- | 2 | 30 |
| Dibenzofuran | < 0.28 | 0.43 | < 0.29 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | < 0.28 | < 0.30 | -- | 100 | 1000 |
| Fluoranthene | < 0.28 | 3.07 | 1.48 | -- | -- | -- | -- | -- | 0.53 | 0.51 | 2.28 | < 0.30 | -- | 1000 | 3000 |
| Fluorene | < 0.28 | 0.59 | < 0.29 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | < 0.28 | < 0.30 | -- | 1000 | 3000 |
| Indeno (1,2,3-cd) pyrene | < 0.28 | 0.55 | 0.92 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | 0.80 | < 0.30 | -- | 20 | 300 |
| Naphthalene | < 0.28 | 0.79 | < 0.29 | -- | -- | -- | -- | -- | < 0.27 | < 0.25 | < 0.28 | < 0.30 | -- | 4 | 20 |
| Phenanthrene | < 0.28 | 3.23 | 0.56 | -- | -- | -- | -- | -- | 0.27 | < 0.25 | 1.78 | < 0.30 | -- | 10 | 1000 |
| Pyrene | < 0.28 | 2.20 | 1.48 | -- | -- | -- | -- | -- | 0.52 | 0.60 | 2.54 | < 0.30 | -- | 1000 | 3000 |
| **Total SVOCs** | -- | 17.53 | 10.55 | -- | -- | -- | -- | -- | 2.59 | 2.47 | 14.1 | 0 | -- | | -- |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | | |
| Hydrocarbon, Oil, Petroleum | < 10.5 | 53.2 | 72.3 D | -- | -- | -- | -- | -- | 36.8 | 20.6 | 70.3 | 19.6 | -- | 1000 | 3000 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | | |
| 4,4'-DDD | < 0.0027 | < 0.0027 | < 0.0027 | -- | -- | -- | -- | -- | < 0.0027 | < 0.0026 | < 0.0028 | < 0.0029 | -- | 10 | 40 |
| BHC-alpha | < 0.0027 | < 0.0027 | < 0.0027 | -- | -- | -- | -- | -- | < 0.0027 | < 0.0026 | < 0.0028 | < 0.0029 | -- | 50 | 500 |
| Dieldrin | < 0.0027 | < 0.0027 | < 0.0027 | -- | -- | -- | -- | -- | < 0.0027 | < 0.0026 | < 0.0028 | < 0.0029 | -- | 0.09 | 0.6 |
| Endosulfan, beta | < 0.0027 | < 0.0027 | < 0.0027 | -- | -- | -- | -- | -- | < 0.0027 | < 0.0026 | < 0.0028 | < 0.0029 | -- | 0.5 | 1 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | | |
| Arsenic | 1.31 | 2.86 | 6.72 | -- | -- | -- | -- | -- | 5.39 | 2.99 | 8.09 | 6.38 | -- | 20 | 20 |
| Barium | 5.93 | 8.73 | 216 | -- | -- | -- | -- | -- | 31.9 | 14.9 | 104 | 58 | -- | 1000 | 3000 |
| Beryllium | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 100 | 200 |
| Cadmium | < 0.4 | < 0.39 | < 0.39 | -- | -- | -- | -- | -- | < 0.36 | < 0.39 | < 0.38 | < 0.44 | -- | 80 | 80 |
| Chromium | 4.29 | 4.36 | 26.7 | -- | -- | -- | -- | -- | 11.1 | 5.89 | 12.5 | 11.8 | -- | 100 | 200 |
| Lead | 9.18 | 5.02 | 676 | 340 | 183 | 1890 | 413 | 1230 | 188 | 53.5 | 368 | 171 | 235 | 200 | 600 |
| Mercury | 0.04 | < 0.03 | 0.24 | -- | -- | -- | -- | -- | 0.15 | 0.36 | 0.99 D | 0.33 | -- | 20 | 40 |
| Nickel | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 700 | 1000 |
| Silver | < 0.4 | < 0.39 | 0.53 | -- | -- | -- | -- | -- | < 0.36 | < 0.39 | < 0.38 | < 0.44 | -- | 100 | 200 |
| Vanadium | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 500 | 800 |
| Zinc | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 | 3000 |

Notes:
Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 1
Site 1 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **EE-8.5** | **EE-0.5** | **FF-1** | **FF-3** | **FF-5** | **FF-7** | **G-1** | **G-1** | **G-1** | **G-2** | **G-3** | **G-3** | **G-5** | **MCP Concentrations** | |
| Sample ID | EE-8.5 | EE-0.5 | FF-1 | **FF-3** | **FF-5** | **FF-7** | G-1 | G-1 4-5 | G-1 9-10 | G-2 4-5 | G-3 0-4 | G-3 4-8 | G-5 | | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 4-5 | 9-10 | 4-5 | 0-4 | 4-8 | 0-5 | | |
| Sample Date | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | 5/2/2024 | 6/21/2024 | 5/3/2024 | 5/1/2024 | 5/1/2024 | 5/2/2024 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 24D1044-13 | 24D1044-14 | 24D1044-12 | 24D1044-11 | 24D1044-10 | 24D1044-09 | 24E0124-11 | 24E0125-16 | 24F0929-07 | 24E0126-07 | 24E0050-06 | 24E0050-07 | 24E0124-10 | | |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | | |
| Acetone | < 0.048 | < 0.068 | < 0.045 | < 0.045 | < 0.046 | < 0.047 | < 0.055 | -- | -- | -- | < 0.049 | < 0.051 | < 0.050 | 6 | 50 |
| Naphthalene | < 0.005 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | < 0.005 | < 0.005 | < 0.005 | 4 | 20 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | -- | -- | -- | < 0.03 | 0.03 | < 0.03 | 0.05 | 6 |
| 2-Methylnaphthalene | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | < 0.28 | < 0.27 | 0.7 | 80 |
| Acenaphthylene | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | < 0.28 | < 0.27 | 2 | 10 |
| Anthracene | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | 0.40 | < 0.27 | 1000 | 3000 |
| Benzo(A)anthracene | < 0.29 | < 0.29 | 0.42 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | 0.78 | < 0.27 | 20 | 300 |
| Benzo(A)pyrene | < 0.29 | < 0.29 | 0.42 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | 0.80 | < 0.27 | 2 | 30 |
| Benzo(B)fluoranthene | < 0.29 | < 0.29 | 0.44 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | 0.55 | < 0.27 | 20 | 300 |
| Benzo(g,h,i)Perylene | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | 0.52 | < 0.27 | 1000 | 3000 |
| Benzo(K)fluoranthene | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | 0.47 | < 0.27 | 1000 | 3000 |
| Bis (2-ethylhexyl) phthalate | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | < 0.28 | < 0.27 | 100 | 700 |
| Butylbenzylphthalate | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | < 0.28 | < 0.27 | 100 | 1000 |
| Chrysene | < 0.29 | < 0.29 | 0.41 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | 0.77 | < 0.27 | 200 | 3000 |
| Di-n-octyl phthalate | < 0.57 | < 0.58 | < 0.54 | < 0.54 | < 0.54 | < 0.57 | < 0.56 | -- | -- | -- | < 0.55 | < 0.56 | < 0.54 | 1000 | 10000 |
| Dibenzo(A,H)anthracene | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | < 0.28 | < 0.27 | 2 | 30 |
| Dibenzofuran | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | < 0.28 | < 0.27 | 100 | 1000 |
| Fluoranthene | < 0.29 | < 0.29 | 0.88 | < 0.27 | < 0.27 | < 0.29 | 0.31 | -- | -- | -- | 0.58 | 1.39 | 0.35 | 1000 | 3000 |
| Fluorene | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | < 0.28 | < 0.27 | 1000 | 3000 |
| Indeno (1,2,3-cd) pyrene | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | 0.48 | < 0.27 | 20 | 300 |
| Naphthalene | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | < 0.27 | < 0.28 | < 0.27 | 4 | 20 |
| Phenanthrene | < 0.29 | < 0.29 | 0.45 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | 0.56 | 1.51 | < 0.27 | 10 | 1000 |
| Pyrene | < 0.29 | < 0.29 | 0.76 | < 0.27 | < 0.27 | < 0.29 | 0.29 | -- | -- | -- | 0.56 | 1.67 | 0.44 | 1000 | 3000 |
| **Total SVOCs** | 0 | 0 | 3.77 | 0 | 0 | 0 | 0.60 | -- | -- | -- | 1.70 | 9.38 | 0.78 | | -- |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | | |
| Hydrocarbon, Oil, Petroleum | < 11.1 | 72.8 D | 42 | < 11.4 | < 10.5 | 16.2 | 27.5 | -- | -- | -- | 19.6 | 44.7 | 20.7 | 1000 | 3000 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | | |
| 4,4'-DDD | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | < 0.003 | < 0.003 | < 0.003 | 10 | 40 |
| BHC-alpha | < 0.003 | < 0.003 | 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | < 0.003 | < 0.003 | < 0.003 | 50 | 500 |
| Dieldrin | < 0.003 | < 0.003 | 0.025 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.6 |
| Endosulfan, beta | < 0.003 | < 0.003 | 0.006 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | < 0.003 | < 0.003 | < 0.003 | 0.5 | 1 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | | |
| Arsenic | 6.02 | 4.39 | 1.47 | 4.08 | 3.12 | 4.41 | 4.4 | -- | -- | -- | 4.93 | 4.95 | 3.38 | 20 | 20 |
| Barium | 66.6 | 28.6 | 16.6 | 16.4 | 16.4 | 20.7 | 50 | -- | -- | -- | 21.5 | 24.9 | 18.1 | 1000 | 3000 |
| Beryllium | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 100 | 200 |
| Cadmium | < 0.37 | < 0.41 | < 0.38 | < 0.42 | < 0.4 | < 0.43 | < 0.42 | -- | -- | -- | < 0.37 | < 0.42 | < 0.36 | 80 | 80 |
| Chromium | 12 | 10.7 | 5.23 | 9.93 | 7.16 | 9.44 | 12.3 | -- | -- | -- | 10.2 | 13 | 6.3 | 100 | 200 |
| Lead | 134 | 37.6 | 22.1 | 13.9 | 6.21 | 61.3 | 441 | 5420 D | 31.6 | 863 | 24.2 | 59.7 | 51.1 | 200 | 600 |
| Mercury | 0.14 | < 0.03 | 0.13 | < 0.036 | < 0.033 | 0.048 | 0.138 | -- | -- | -- | < 0.03 | 0.05 | 0.18 | 20 | 40 |
| Nickel | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 700 | 1000 |
| Silver | < 0.37 | < 0.41 | < 0.38 | < 0.42 | < 0.4 | < 0.43 | < 0.42 | -- | -- | -- | < 0.37 | < 0.42 | < 0.36 | 100 | 200 |
| Vanadium | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 500 | 800 |
| Zinc | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 | 3000 |

Notes:
Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 1
Site 1 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **G-5** | **G-5** | **G-7** | **H-1** | **H-8.5** | **HH-1** | **HH-3** | **HH-5** | **HH-7** | **I-1** | **I-3** | **I-3** | **I-5** | **MCP Concentrations** | |
| Sample ID | G-5 5-6 | G-5 9-10 | G-7 | H-1 4-5 | H-8.5 | HH-1 | HH-3 | HH-5 | HH-7 | I-1 | I-3 | I-3 4-8 | I-5 | | |
| Sample Depth (feet) | 5-6 | 9-10 | 0-5 | 4-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-4 | 4-8 | 0-5 | | |
| Sample Date | 6/21/2024 | 6/21/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/30/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | 5/1/2024 | 6/21/2024 | 5/2/2024 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 24F0928-19 | 24F0929-11 | 24E0124-09 | 24E0125-17 | 24E0124-12 | 24D1044-08 | 24E0026-04 | 24D1044-06 | 24D1044-05 | 24E0124-15 | 24E0050-04 | 24F0927-02 | 24E0124-14 | | |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | | |
| Acetone | -- | -- | < 0.055 | -- | < 0.054 | < 0.044 | < 0.046 | < 0.043 | < 0.063 | < 0.047 | < 0.046 | < 0.049 | < 0.048 | 6 | 50 |
| Naphthalene | -- | -- | < 0.006 | -- | < 0.005 | < 0.004 | 0.013 | < 0.004 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 4 | 20 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | | |
| 1,1-Biphenyl | -- | -- | < 0.03 | -- | < 0.03 | < 0.03 | 0.04 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 0.04 | 0.05 | 6 |
| 2-Methylnaphthalene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | < 0.27 | 0.7 | 80 |
| Acenaphthylene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | 1.05 | 2 | 10 |
| Anthracene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | 0.47 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | 0.82 | 1000 | 3000 |
| Benzo(A)anthracene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | 0.48 | < 0.28 | < 0.29 | 0.38 | < 0.27 | < 0.28 | 3.22 | 20 | 300 |
| Benzo(A)pyrene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | 0.40 | < 0.28 | < 0.29 | 0.40 | < 0.27 | < 0.28 | 2.23 | 2 | 30 |
| Benzo(B)fluoranthene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | 0.41 | < 0.28 | < 0.29 | 0.46 | < 0.27 | < 0.28 | 2.20 | 20 | 300 |
| Benzo(g,h,i)Perylene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | 1.19 | 1000 | 3000 |
| Benzo(K)fluoranthene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | 0.71 | 1000 | 3000 |
| Bis (2-ethylhexyl) phthalate | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | 0.53 | < 0.28 | < 0.27 | < 0.28 | < 0.27 | 100 | 700 |
| Butylbenzylphthalate | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | 1.32 | < 0.28 | < 0.27 | < 0.28 | < 0.27 | 100 | 1000 |
| Chrysene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | 0.42 | < 0.28 | < 0.29 | 0.43 | < 0.27 | < 0.28 | 4.09 | 200 | 3000 |
| Di-n-octyl phthalate | -- | -- | < 0.55 | -- | < 0.51 | < 0.56 | < 0.55 | < 0.55 | 1.03 | < 0.56 | < 0.54 | < 0.55 | < 0.54 | 1000 | 10000 |
| Dibenzo(A,H)anthracene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | 0.38 | 2 | 30 |
| Dibenzofuran | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | < 0.27 | 100 | 1000 |
| Fluoranthene | -- | -- | 0.28 | -- | < 0.26 | 0.39 | 1.28 | < 0.28 | < 0.29 | 0.73 | 0.41 | 0.33 | 3.58 | 1000 | 3000 |
| Fluorene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | < 0.27 | 1000 | 3000 |
| Indeno (1,2,3-cd) pyrene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | 1.00 | 20 | 300 |
| Naphthalene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | 0.35 | < 0.28 | < 0.29 | < 0.28 | < 0.27 | < 0.28 | < 0.27 | 4 | 20 |
| Phenanthrene | -- | -- | < 0.28 | -- | < 0.26 | < 0.28 | 1.56 | < 0.28 | < 0.29 | 0.38 | < 0.27 | < 0.28 | 2.48 | 10 | 1000 |
| Pyrene | -- | -- | 0.37 | -- | < 0.26 | 0.33 | 0.97 | < 0.28 | < 0.29 | 0.69 | 0.44 | 0.41 | 5.88 | 1000 | 3000 |
| **Total SVOCs** | -- | -- | 0.64 | -- | 0 | 0.71 | 6.37 | 0 | 2.80 | 3.48 | 0.86 | 0.74 | 28.87 | | -- |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | | |
| Hydrocarbon, Oil, Petroleum | -- | -- | 63.4 | -- | 17.9 | 298 | < 11.2 | < 10.6 | 15.5 | 28.1 | 73.8 | 73.2 | 16 | 1000 | 3000 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | | |
| 4,4'-DDD | -- | -- | < 0.003 | -- | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 10 | 40 |
| BHC-alpha | -- | -- | < 0.003 | -- | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 50 | 500 |
| Dieldrin | -- | -- | < 0.003 | -- | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.6 |
| Endosulfan, beta | -- | -- | < 0.003 | -- | < 0.003 | 0.004 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.5 | 1 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | | |
| Arsenic | -- | -- | < 0.86 | -- | 2.79 | 4.83 | 2.67 | 1.8 | 3.24 | 6.3 | 2.58 | < 0.99 | 3.94 | 20 | 20 |
| Barium | -- | -- | < 0.86 | -- | 21.6 | 21.9 | 12.9 | 8.93 | 19.4 | 44.7 | 35.2 | 13 | 14.2 | 1000 | 3000 |
| Beryllium | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 100 | 200 |
| Cadmium | -- | -- | < 0.43 | -- | < 0.4 | < 0.38 | < 0.4 | < 0.41 | < 0.42 | < 0.41 | < 0.36 | < 0.49 | < 0.39 | 80 | 80 |
| Chromium | -- | -- | < 0.86 | -- | 10.1 | 7.16 | 4.97 | 3.9 | 5.41 | 15.4 | 7.1 | 5.09 | 9.6 | 100 | 200 |
| Lead | 46.5 | 101 | < 4.3 | 89.4 D | 17.6 | 86.2 | 18.8 | < 4.12 | 53.6 | 107 | 34 | 35.2 | 19.4 | 200 | 600 |
| Mercury | -- | -- | 0.13 | -- | 0.07 | 0.05 | < 0.03 | < 0.03 | 0.13 | 0.26 | 0.08 | < 0.03 | 0.13 | 20 | 40 |
| Nickel | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 700 | 1000 |
| Silver | -- | -- | < 0.43 | -- | < 0.4 | < 0.38 | < 0.4 | < 0.41 | < 0.42 | < 0.41 | < 0.36 | -- | < 0.39 | 100 | 200 |
| Vanadium | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 500 | 800 |
| Zinc | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 | 3000 |

Notes:
Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 1
Site 1 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Location | **I-7** | **II-8.5** | **II-8.5** | **II0.5** | **JJ/II-2** | **JJ/II-6** | **MCP Concentrations** | |
| Sample ID | I-7 | **II-8.5** | II-8.5 5-6 | **II-0.5** | **JJ/II-2** | **JJ/II-6** | | |
| Sample Depth (feet) | 0-5 | 0-5 | 5-6 | 0-5 | 0-5 | 0-5 | RCS-1 | RCS-2 |
| Sample Date | 5/2/2024 | 4/29/2024 | 5/3/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | | |
| Laboratory Sample ID | 24E0124-13 | 24D1044-03 | 24E0124-18 | 24D1044-04 | 24D1044-02 | 24D1044-01 | | |
| **VOCs (mg/kg)** | | | | | | | | |
| Acetone | 0.091 | 0.071 | 0.246 | < 0.047 | < 0.047 | < 0.048 | 6 | 50 |
| Naphthalene | < 0.006 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | < 0.005 | 4 | 20 |
| **SVOCs (mg/kg)** | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | < 0.10 | < 0.03 | < 0.027 | < 0.028 | 0.05 | 6 |
| 2-Methylnaphthalene | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 0.7 | 80 |
| Acenaphthylene | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 2 | 10 |
| Anthracene | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 1000 | 3000 |
| Benzo(A)anthracene | < 0.27 | < 0.31 | < 0.99 | 0.65 | < 0.271 | < 0.28 | 20 | 300 |
| Benzo(A)pyrene | < 0.27 | < 0.31 | < 0.99 | 0.62 | < 0.271 | < 0.28 | 2 | 30 |
| Benzo(B)fluoranthene | < 0.27 | < 0.31 | < 0.99 | 0.67 | < 0.271 | < 0.28 | 20 | 300 |
| Benzo(g,h,i)Perylene | < 0.27 | < 0.31 | < 0.99 | 0.38 | < 0.271 | < 0.28 | 1000 | 3000 |
| Benzo(K)fluoranthene | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 1000 | 3000 |
| Bis (2-ethylhexyl) phthalate | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 100 | 700 |
| Butylbenzylphthalate | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 100 | 1000 |
| Chrysene | < 0.27 | < 0.31 | < 0.99 | 0.66 | < 0.271 | < 0.28 | 200 | 3000 |
| Di-n-octyl phthalate | < 0.55 | < 0.61 | < 1.98 | < 0.53 | < 0.542 | < 0.561 | 1000 | 10000 |
| Dibenzo(A,H)anthracene | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 2 | 30 |
| Dibenzofuran | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 100 | 1000 |
| Fluoranthene | < 0.27 | 0.42 | 0.99 | 1.44 | < 0.271 | < 0.28 | 1000 | 3000 |
| Fluorene | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 1000 | 3000 |
| Indeno (1,2,3-cd) pyrene | < 0.27 | < 0.31 | < 0.99 | 0.37 | < 0.271 | < 0.28 | 20 | 300 |
| Naphthalene | < 0.27 | < 0.31 | < 0.99 | < 0.26 | < 0.271 | < 0.28 | 4 | 20 |
| Phenanthrene | < 0.27 | < 0.31 | < 0.99 | 0.98 | < 0.271 | < 0.28 | 10 | 1000 |
| Pyrene | < 0.27 | 0.40 | 0.99 | 1.24 | < 0.271 | < 0.28 | 1000 | 3000 |
| **Total SVOCs** | 0 | 0.82 | 1.98 | 6.63 | 0 | 0 | | -- |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | |
| Hydrocarbon, Oil, Petroleum | < 11.9 | 36.2 | 273 | 32 | < 10.6 | < 11 | 1000 | 3000 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | |
| 4,4'-DDD | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | < 0.003 | 10 | 40 |
| BHC-alpha | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | < 0.003 | 50 | 500 |
| Dieldrin | < 0.003 | < 0.003 | < 0.005 | 0.037 | < 0.003 | < 0.003 | 0.09 | 0.6 |
| Endosulfan, beta | < 0.003 | < 0.003 | < 0.005 | 0.009 | < 0.003 | < 0.003 | 0.5 | 1 |
| **Total Metals (mg/kg)** | | | | | | | | |
| Arsenic | 5.81 | 6.55 | 6.92 | 1.83 | 2.62 | 3.29 | 20 | 20 |
| Barium | 24.1 | 86.3 | 55.4 | 18.4 | 11.3 | 13 | 1000 | 3000 |
| Beryllium | -- | -- | -- | -- | -- | -- | 100 | 200 |
| Cadmium | < 0.46 | < 0.45 | < 0.7 | < 0.37 | < 0.39 | < 0.38 | 80 | 80 |
| Chromium | 19.8 | 12.1 | 9.25 | 3.76 | 5.07 | 6.43 | 100 | 200 |
| Lead | 27.3 | 347 | 21.4 | 39.4 | 6.81 | 12.8 | 200 | 600 |
| Mercury | 0.09 | 0.58 | < 0.06 | 0.07 | < 0.035 | < 0.031 | 20 | 40 |
| Nickel | -- | -- | -- | -- | -- | -- | 700 | 1000 |
| Silver | < 0.46 | < 0.45 | < 0.7 | < 0.37 | < 0.39 | < 0.38 | 100 | 200 |
| Vanadium | -- | -- | -- | -- | -- | -- | 500 | 800 |
| Zinc | -- | -- | -- | -- | -- | -- | 1000 | 3000 |

Notes:

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.

SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls

D = identified in an analysis that has been diluted

< = not detected above laboratory reporting limit

-- = Not Tested

NS = No Standard

Exceeds MassDEP MCP RCS-1

Exceeds MassDEP MCP RCS-1 and RCS-2

Table 2
Site 1 - Soil PCBs
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **A-1** | **A-1** | **A-1** | **A-1** | **A-2** | **A-2** | **A-2** | **A-2** | **A-3** | **A-3** | **A-3** | **A-3** | | |
| Sample ID | A-1 | A-1 0-1 | A-1 1-2 | A-1 3-4 | A-2 0-1 | A-2 1-2 | A-2 2-3 | A-2 3-4 | A-3 | A-3 1-2 | A-3 2-3 | A-3 4-5 | | |
| Sample Depth (feet) | 0-5 | 0-1 | 1-2 | 4-5 | 0-1 | 1-2 | 2-3 | 3-4 | 0-5 | 1-2 | 2-3 | 4-5 | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 6/20/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 24E0050-03 | 24G0454-03 | 24E0051-02 | 24E0051-11 | 23L0931-01 | 23L0931-02 | 23L0931-03 | 24F0928-16 | 24E0050-02 | 24E0051-03 | 24E0814-07 | 24E0051-12 | | |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | 0.3 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1254 | 0.1 | 0.3 | < 0.05 | 0.2 | < 0.06 | < 0.06 | 0.6 | 0.2 | 0.3 | 0.4 | 1.1 | 0.2 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| Total PCBs | 0.1 | 0.3 | -- | 0.2 | -- | -- | 0.9 | 0.2 | 0.3 | 0.4 | 1.1 | 0.2 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **A-4** | **A-4** | **A-4** | **A-4** | **A-5** | **A-5** | **A-5** | **A-5** | **A-6** | **A-6 DUP** | **A-6** | **A-7** | | |
| Sample ID | A-4 0-1 | A-4 1-2 | A-4 2-3 | A-4 3-4 | A-5 | A-5 1-2 | A-5 2-3 | A-5 4-5 | A-6 1-2 | A-6 DUP 1-2 | A-6 4-5 | A-7 | | |
| Sample Depth (feet) | 0-1 | 1-2 | 2-3 | 3-4 | 0-5 | 1-2 | 2-3 | 4-5 | 1-2 | 1-2 | 4-5 | 0-5 | | |
| Sample Date | 12/29/2023 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 23L0931-07 | 23L0931-08 | 23L0931-09 | 23L0931-10 | 24E0050-01 | 24E0051-04 | 24E0814-09 | 24E0051-13 | 24E0051-05 | 24E0051-18 | 24E0051-14 | 24E0050-05 | | |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.07 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.07 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.07 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.07 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.06 | < 0.06 | 0.3 | 0.08 | < 0.05 | < 0.05 | < 0.06 | 0.1 | < 0.05 | < 0.05 | < 0.07 | 0.1 | -- | -- |
| PCB Aroclor 1254 | < 0.06 | 0.5 | 1.3 D | 0.6 | 0.1 | 0.3 | 0.09 | 0.2 | < 0.05 | < 0.05 | 0.09 | 0.3 | -- | -- |
| PCB Aroclor 1260 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.07 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.07 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.07 | < 0.06 | -- | -- |
| Total PCBs | -- | 0.5 | 1.6 | 0.68 | 0.1 | 0.3 | 0.09 | 0.3 | -- | -- | 0.09 | 0.4 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **A0** | **A0** | **A0-5W** | **A0-10W** | **A0-10W** | **A0-20N10W** | **A0-20N10W** | **A0.5** | **AA-1** | **AA-1** | **AA-1** | | |
| Sample ID | A0 0-1 | A-0 1-2 | A0-5W 0-1 | A0-10W 0-1 | A0-10W 2-3 | A0-20N10W 0-1 | A0-20N10W 1-2 | A0.5 0-1 | AA-1 0-1 | AA-1 1-2 | AA-1 2-3 | | |
| Sample Depth (feet) | 0-1 | 1-2 | 0-1 | 0-1 | 2-3 | 0-1 | 1-2 | 0-1 | 0-1 | 1-2 | 2-3 | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 7/17/2024 | 7/17/2024 | 7/17/2024 | 7/17/2024 | 7/17/2024 | 7/17/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 24G0151-02 | 24E0051-01 | 24G1155-03 | 24G0737-01 | 24G0737-02 | 24G0737-03 | 24G0737-04 | 24G0736-01 | 24G0454-02 | 24E0029-07 | 24E0814-03 | | |
| **PCBs (mg/kg)** | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 10.4 | < 0.05 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 0.05 | < 6.6 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 10.4 | < 0.05 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 0.05 | < 6.6 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 10.4 | < 0.05 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 0.05 | < 6.6 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 10.4 | < 0.05 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 0.05 | < 6.6 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 10.4 | < 0.05 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 0.05 | < 6.6 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | 125 D | 0.4 | 4.5 D | 15.7 D | 0.4 | 0.3 | < 0.05 | 68 D | < 0.05 | < 0.05 | 0.2 | -- | -- |
| PCB Aroclor 1260 | < 10.4 | < 0.05 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 0.05 | < 6.6 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 10.4 | < 0.05 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 0.05 | < 6.6 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 10.4 | < 0.05 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 0.05 | < 6.6 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| Total PCBs | 125 | 0.4 | 4.5 | 15.7 | 0.4 | 0.3 | -- | 68 | -- | -- | 0.2 | 1 | 4 |

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 2
Site 1 - Soil PCBs
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **AA-1** | **AA-2** | **AA-2** | **AA-2** | **AA-3** | **AA-3** | **AA-3** | **AA-3** | **AA-4** | **AA-4 DUP** | **AA-4** | **AA-4** | | |
| Sample ID | AA-1 4-5 | AA-2 1-2 | AA-2 DUP 1-2 | AA-2 4-5 | AA-3 0-1 | AA-3 1-2 | AA-3 2-3 | AA-3 3-4 | AA-4 1-2 | AA-4 DUP 1-2 | AA-4 2-3 | AA-4 4-5 | | |
| Sample Depth (feet) | 4-5 | 1-2 | 1-2 | 4-5 | 0-1 | 1-2 | 2-3 | 3-4 | 1-2 | 1-2 | 2-3 | 4-5 | | |
| Sample Date | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 6/20/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | | |
| Laboratory Sample ID | 24E0027-06 | 24E0029-08 | 24E0029-09 | 24E0027-07 | 23L0931-04 | 23L0931-05 | 23L0931-06 | 24F0928-15 | 24E0029-10 | 24E0027-09 | 24E0814-08 | 24E0027-08 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.1 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1254 | 0.6 | 1.4 D | 0.6 | 0.6 | 0.1 | 0.7 | 0.2 | 0.4 | 0.6 | 0.4 | 0.5 | 0.2 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| Total PCBs | 0.6 | 1.4 | 0.6 | 0.6 | 0.1 | 0.8 | 0.2 | 0.4 | 0.6 | 0.4 | 0.5 | 0.2 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **AA-5** | **AA-5** | **AA-6** | **AA-6** | **AA-8.5** | **AA0** | **AA0** | **AA0 DUP** | **AA0** | **AA0.5** | **B-1** | **B-1** | | |
| Sample ID | AA-5 1-2 | AA-5 4-5 | AA-6 1-2 | AA-6 4-5 | **AA-8.5** | AA0 0-1 | AA-0 1-2 | AA-0 DUP 1-2 | AA-0 4-5 | AA0.5 0-1 | B-1 0-1 | B-1 1-2 | | |
| Sample Depth (feet) | 1-2 | 4-5 | 1-2 | 4-5 | 0-5 | 0-1 | 1-2 | 1-2 | 4-5 | 0-1 | 0-1 | 1-2 | | |
| Sample Date | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 7/17/2024 | 5/1/2024 | 5/1/2024 | | |
| Laboratory Sample ID | 24E0027-10 | 24E0027-11 | 24E0027-12 | 24E0027-13 | 24E0026-09 | 24G0454-01 | 24E0029-05 | 24E0029-06 | 24E0027-05 | 24G0736-02 | 24G0151-03 | 24E0051-07 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | 0.06 | 0.2 | < 0.05 | 0.08 | 0.2 | 2 D | 0.2 | 0.2 | 0.2 | 7.1 D | 2.5 D | < 0.05 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.2 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| Total PCBs | 0.06 | 0.2 | -- | 0.08 | 0.2 | 2 | 0.2 | 0.2 | 0.4 | 7.1 | 2.5 | -- | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **B-1** | **B-2** | **B-2** | **B-2** | **B-3** | **B-3** | **B-3** | **B-3** | **B-4** | **B-5** | **B-5** | **B-5** | | |
| Sample ID | B-1 4-5 | B-2 0-1 | B-2 1-2 | B-2 4-5 | B-3 0-1 | B-3 1-2 | B-3 2-3 | B-3 2-3 | B-4 2-3 | B-5 1-2 | B-5 2-3 | B-5 4-5 | | |
| Sample Depth (feet) | 4-5 | 0-1 | 1-2 | 4-5 | 0-1 | 1-2 | 2-3 | 2-3 | 2-3 | 1-2 | 2-3 | 4-5 | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 6/20/2024 | 6/20/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | | |
| Laboratory Sample ID | 24E0051-15 | 24G0453-07 | 24E0051-08 | 24E0051-16 | 23L0931-11 | 23L0931-12 | 23L0932-01 | 24F0928-13 | 24F0928-13 | 24E0051-09 | 24E0814-10 | 24E0051-17 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | 0.3 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | 0.4 | < 0.06 | < 0.05 | 0.2 | < 0.05 | 0.09 | 0.09 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | 0.2 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| Total PCBs | 0.7 | -- | -- | 0.2 | -- | 0.09 | 0.09 | -- | -- | -- | -- | 0.2 | 1 | 4 |

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 2
Site 1 - Soil PCBs
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **B-6** | **B0** | **B0** | **B0** | **B0** | **B0-10E** | **B0-10E** | **B0-10N** | **B0-10N15E** | **B0-10N15W** | **B0-10N15E** | **B0-10N15W** | | |
| Sample ID | B-6 1-2 | B0 0-1 | B-0 1-2 | B0 2-3 | B0 3-4 | B0-10E 0-1 | B0-10E 2-3 | B0-10N 0-1 | B0-10N15E 2-3 | B0-10N15W 2-3 | B0-10N15E 0-1 | B0-10N15W 0-1 | | |
| Sample Depth (feet) | 1-2 | 0-1 | 1-2 | 2-3 | 3-4 | 0-1 | 2-3 | 0-1 | 2-3 | 2-3 | 0-1 | 0-1 | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 6/21/2024 | 6/21/2024 | 6/21/2024 | 7/2/2024 | 7/2/2024 | 7/2/2024 | 7/2/2024 | | |
| Laboratory Sample ID | 24E0051-10 | 24E0814-04 | 24E0051-06 | 24E0814-05 | 24E0814-06 | 24F0929-09 | 24G0151-05 | 24F0929-05 | 24G0453-04 | 24G0453-01 | 24G0152-05 | 24G0152-01 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 23.1 | < 5.8 | < 0.05 | < 0.05 | < 270 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 5.3 | < 10.9 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 23.1 | < 5.8 | < 0.05 | < 0.05 | < 270 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 5.3 | < 10.9 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 23.1 | < 5.8 | < 0.05 | < 0.05 | < 270 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 5.3 | < 10.9 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 23.1 | < 5.8 | < 0.05 | < 0.05 | < 270 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 5.3 | < 10.9 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 23.1 | < 5.8 | < 0.05 | < 0.05 | < 270 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 5.3 | < 10.9 | -- | -- |
| PCB Aroclor 1254 | < 0.05 | 240 D | 102 D | 0.07 | 0.1 | 3040 D | 0.8 | 12.8 D | 0.07 | 0.2 | 83.1 D | 174 D | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 23.1 | < 5.8 | < 0.05 | < 0.05 | < 270 | < 0.05 | < 1 | < 0.05 | 0.06 | < 5.3 | < 10.9 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 23.1 | < 5.8 | < 0.05 | < 0.05 | < 270 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 5.3 | < 10.9 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 23.1 | < 5.8 | < 0.05 | < 0.05 | < 270 | < 0.05 | < 1 | < 0.05 | < 0.05 | < 5.3 | < 10.9 | -- | -- |
| Total PCBs | -- | 240 | 102 | 0.07 | 0.1 | 3040 | 0.8 | 12.8 | 0.07 | 0.26 | 83.1 | 174 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **B0-10S** | **B0-10S** | **B0-10S15E** | **B0-10S15W** | **B0-10S15E** | **B0-10S15W** | **B0-10W** | **B0-10W** | **B0-15E** | **B0-15N15E** | **B0-15N15W** | **B0-15W** | | |
| Sample ID | B0-10S 0-1 | B0-10S 2-3 | B0-10S15E 2-3 | B0-10S15W 2-3 | B0-10S15E 0-1 | BO-10S15W 0-1 | B0-10W 0-1 | B0-10W 2-3 | B0-15E 0-1 | B0-15N15E 0-1 | B0-15N15W 0-1 | B0-15W 0-1 | | |
| Sample Depth (feet) | 0-1 | 2-3 | 2-3 | 2-3 | 0-1 | 0-1 | 0-1 | 2-3 | 0-1 | 0-1 | 0-1 | 0-1 | | |
| Sample Date | 6/21/2024 | 6/21/2024 | 7/2/2024 | 7/2/2024 | 7/2/2024 | 7/2/2024 | 6/21/2024 | 6/21/2024 | 7/2/2024 | 7/17/2024 | 7/17/2024 | 7/2/2024 | | |
| Laboratory Sample ID | 24F0928-20 | 24G0151-06 | 24G0453-06 | 24G0453-03 | 24G0152-08 | 24G0152-04 | 24F0929-02 | 24G0151-07 | 24G0152-06 | 24G1155-02 | 24G1155-01 | 24G0152-02 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 21.2 | < 0.05 | < 0.06 | < 0.06 | < 2.8 | < 21.3 | < 10.2 | < 0.05 | < 10.4 | < 5.1 | < 5.1 | < 26.5 | -- | -- |
| PCB Aroclor 1221 | < 21.2 | < 0.05 | < 0.06 | < 0.06 | < 2.8 | < 21.3 | < 10.2 | < 0.05 | < 10.4 | < 5.1 | < 5.1 | < 26.5 | -- | -- |
| PCB Aroclor 1232 | < 21.2 | < 0.05 | < 0.06 | < 0.06 | < 2.8 | < 21.3 | < 10.2 | < 0.05 | < 10.4 | < 5.1 | < 5.1 | < 26.5 | -- | -- |
| PCB Aroclor 1242 | < 21.2 | < 0.05 | < 0.06 | < 0.06 | < 2.8 | < 21.3 | < 10.2 | < 0.05 | < 10.4 | < 5.1 | < 5.1 | < 26.5 | -- | -- |
| PCB Aroclor 1248 | < 21.2 | < 0.05 | < 0.06 | < 0.06 | < 2.8 | < 21.3 | < 10.2 | < 0.05 | < 10.4 | < 5.1 | < 5.1 | < 26.5 | -- | -- |
| PCB Aroclor 1254 | 317 D | 0.4 | 6.3 D | 0.08 | 54.3 D | 257 D | 139 D | 0.5 | 136 D | 49.9 D | 72.2 D | 456 D | -- | -- |
| PCB Aroclor 1260 | < 21.2 | < 0.05 | < 0.06 | < 0.06 | < 2.8 | < 21.3 | < 10.2 | < 0.05 | < 10.4 | < 5.1 | < 5.1 | < 26.5 | -- | -- |
| PCB Aroclor 1262 | < 21.2 | < 0.05 | < 0.06 | < 0.06 | < 2.8 | < 21.3 | < 10.2 | < 0.05 | < 10.4 | < 5.1 | < 5.1 | < 26.5 | -- | -- |
| PCB Aroclor 1268 | < 21.2 | < 0.05 | < 0.06 | < 0.06 | < 2.8 | < 21.3 | < 10.2 | < 0.05 | < 10.4 | < 5.1 | < 5.1 | < 26.5 | -- | -- |
| Total PCBs | 317 | 0.4 | 6.3 | 0.08 | 54.3 | 257 | 139 | 0.5 | 136 | 49.9 | 72.2 | 456 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **B0-20E** | **B0-20E** | **B0-20N15E** | **B0-20N15W** | **B0-20N15W** | **B0-20W** | **B0-20W** | **B0-5E** | **B0-5N** | **B0-5S** | **B0-5W** | **BB-0** | | |
| Sample ID | B0-20E 0-1 | B0-20E 2-3 | B0-20N15E 0-1 | B0-20N15W 0-1 | B0-20N15W 1-2 | B0-20W 0-1 | B0-20W 2-3 | B0-5E 0-1 | B0-5N 0-1 | B0-5S 0-1 | B0-5W 0-1 | BB-0 0-1 | | |
| Sample Depth (feet) | 0-1 | 2-3 | 0-1 | 0-1 | 1-2 | 0-1 | 2-3 | 0-1 | 0-1 | 0-1 | 0-1 | 0-1 | | |
| Sample Date | 7/2/2024 | 7/2/2024 | 7/17/2024 | 7/17/2024 | 7/17/2024 | 7/2/2024 | 7/2/2024 | 6/21/2024 | 6/21/2024 | 6/21/2024 | 6/21/2024 | 12/29/2023 | | |
| Laboratory Sample ID | 24G0152-07 | 24G0453-05 | 24G0736-07 | 24G0736-08 | 24G0736-09 | 24G0152-03 | 24G0453-02 | 24F0929-04 | 24F0929-06 | 24F0929-03 | 24F0929-01 | 23L0932-02 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 5.4 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 5.6 | < 0.05 | < 5.1 | < 2.6 | < 10.2 | < 10.1 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 5.4 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 5.6 | < 0.05 | < 5.1 | < 2.6 | < 10.2 | < 10.1 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 5.4 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 5.6 | < 0.05 | < 5.1 | < 2.6 | < 10.2 | < 10.1 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 5.4 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 5.6 | < 0.05 | < 5.1 | < 2.6 | < 10.2 | < 10.1 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 5.4 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 5.6 | < 0.05 | < 5.1 | < 2.6 | < 10.2 | < 10.1 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | 67.6 D | 0.2 | 3.1 D | 0.5 | 0.1 | 81.8 D | 0.3 | 93.7 D | 35.3 D | 180 D | 167 D | 0.8 | -- | -- |
| PCB Aroclor 1260 | < 5.4 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 5.6 | < 0.05 | < 5.1 | < 2.6 | < 10.2 | < 10.1 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 5.4 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 5.6 | < 0.05 | < 5.1 | < 2.6 | < 10.2 | < 10.1 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 5.4 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 5.6 | < 0.05 | < 5.1 | < 2.6 | < 10.2 | < 10.1 | < 0.05 | -- | -- |
| Total PCBs | 67.6 | 0.2 | 3.1 | 0.5 | 0.1 | 81.8 | 0.3 | 93.7 | 35.3 | 180 | 167 | 0.8 | 1 | 4 |

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 2
Site 1 - Soil PCBs
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **BB-0** | **BB-0** | **BB-0** | **BB-1** | **BB-1** | **BB-1** | **BB-1** | **BB-1** | **BB-1** | **BB-2** | **BB-2** | **BB-2** | | |
| Sample ID | BB-0 1-2 | BB-0 2-3 | BB-0 3-4 | BB-1 0-1 | BB-1 1-2 | BB-1 2-3 | BB-1 | BB-1 3-4 | BB-1 4-5 | BB-2 1-2 | BB-2 2-3 | BB-2 3-4 | | |
| Sample Depth (feet) | 1-2 | 2-3 | 3-4 | 0-1 | 1-2 | 2-3 | 0-5 | 3-4 | 4-5 | 1-2 | 2-3 | 3-4 | | |
| Sample Date | 12/29/2023 | 12/29/2023 | 6/20/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 4/30/2024 | 6/20/2024 | 6/20/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | | |
| Laboratory Sample ID | 23L0932-03 | 23L0932-04 | 24F0928-18 | 23L0932-05 | 23L0932-06 | 23L0932-07 | 24E0026-08 | 24F0928-17 | 24F0927-10 | 23L0932-08 | 23L0932-09 | 23L0932-10 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | 0.1 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | 0.09 | -- | -- |
| PCB Aroclor 1254 | < 0.06 | 1.5 D | 0.2 | < 0.06 | 0.3 | 0.7 | 0.6 | 0.7 | 0.5 | < 0.06 | 0.5 | 0.4 | -- | -- |
| PCB Aroclor 1260 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | 0.1 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- |
| Total PCBs | 0 | 1.5 | 0.2 | 0 | 0.3 | 0.8 | 0.7 | 0.7 | 0.5 | -- | 0.5 | 0.49 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **BB-3** | **BB-3** | **BB-3** | **BB-4** | **BB-4** | **BB-5** | **BB-5** | **BB-5** | **BB-6** | **BB-6** | **BB-7** | **C-1** | | |
| Sample ID | BB-3 | BB-3 1-2 | BB-3 4-5 | BB-4 1-2 | BB-4 4-5 | BB-5 | BB-5 1-2 | BB-5 4-5 | BB-6 1-2 | BB-6 4-5 | BB-7 | C-1 | | |
| Sample Depth (feet) | 0-5 | 1-2 | 4-5 | 1-2 | 4-5 | 0-5 | 1-2 | 4-5 | 1-2 | 4-5 | 0-5 | 0-5 | | |
| Sample Date | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 5/2/2024 | | |
| Laboratory Sample ID | 24E0026-07 | 24E0029-04 | 24E0027-04 | 24E0029-03 | 24E0027-03 | 24E0026-06 | 24E0029-02 | 24E0027-02 | 24E0029-01 | 24E0027-01 | 24E0026-05 | 24E0124-01 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | 0.08 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1254 | 0.2 | 0.4 | 0.3 | 0.08 | 0.09 | 0.07 | 0.2 | 0.08 | < 0.06 | 0.09 | 0.06 | 0.2 | -- | -- |
| PCB Aroclor 1260 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| Total PCBs | 0.2 | 0.4 | 0.3 | 0.08 | 0.09 | 0.07 | 0.2 | 0.08 | -- | 0.09 | 0.14 | 0.2 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **C-1** | **C-1** | **C-2** | **C-2** | **C-2** | **C-2** | **C-3** | **C-3** | **C-3** | **C-4** | **C-4** | **C-4** | | |
| Sample ID | C-1 0-1 | C-1 1-2 | C-2 0-1 | C-2 1-2 | C-2 2-3 | C-2 3-4 | C-3 | C-3 1-2 | C-3 4-5 | C-4 0-1 | C-4 1-2 | C-4 2-3 | | |
| Sample Depth (feet) | 0-1 | 1-2 | 0-1 | 1-2 | 2-3 | 3-4 | 0-5 | 1-2 | 4-5 | 0-1 | 1-2 | 2-3 | | |
| Sample Date | 5/2/2024 | 5/2/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | | |
| Laboratory Sample ID | 24G0151-04 | 24E0125-05 | 23L0932-11 | 23L0932-12 | 23L0932-13 | 23L0932-14 | 24E0124-02 | 24E0125-04 | 24E0125-06 | 23L0932-15 | 23L0932-16 | 23L0932-17 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | 0.1 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | 0.2 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | 0.3 | 0.08 | < 0.05 | < 0.06 | < 0.05 | 0.1 | 0.1 | -- | -- |
| PCB Aroclor 1260 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| Total PCBs | 0.2 | -- | -- | -- | -- | 0.4 | 0.08 | -- | -- | -- | 0.1 | 0.1 | 1 | 4 |

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 2
Site 1 - Soil PCBs
New Bedford Marine Commerce Terminal
New Bedford, MA

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | **MCP Concentrations** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **C-5** | **C-5** | **C-5** | **C-6** | **C-7** | **C0** | **C0** | **C0 DUP** | **C0** | **C0.5** | **CC-1** | **CC-1** | | |
| Sample ID | C-5 | C-5 1-2 | C-5 4-5 | C-6 1-2 | C-7 | C0 0-1 | C0 1-2 | C0 DUP 1-2 | C0 4-5 | C0.5 0-1 | CC-1 3-4 | CC-1 1-2 | | |
| Sample Depth (feet) | 0-5 | 1-2 | 4-5 | 1-2 | 0-5 | 0-1 | 1-2 | 1-2 | 4-5 | 0-1 | 3-4 | 1-2 | | |
| Sample Date | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/17/2024 | 4/25/2024 | 4/29/2024 | | |
| Laboratory Sample ID | 24E0124-03 | 24E0125-03 | 24E0125-01 | 24E0125-02 | 24E0124-04 | 24G0151-01 | 24E0050-08 | 24E0050-10 | 24E0050-09 | 24G0736-03 | 24E0814-01 | 24D1045-10 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | 0.1 | -- | -- |
| PCB Aroclor 1254 | 0.1 | < 0.05 | 0.2 | 0.1 | < 0.05 | 3.4 D | < 0.05 | < 0.05 | 0.3 | 9.3 D | 8.2 D | 0.5 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.1 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| Total PCBs | 0.1 | -- | 0.2 | 0.1 | -- | 3.4 | -- | -- | 0.4 | 9.3 | 8.2 | 0.6 | 1 | 4 |

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | **MCP Concentrations** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **CC-1** | **CC-2** | **CC-2 DUP** | **CC-2** | **CC0** | **CC0** | **CC0** | **CEC-1-1** | **CEC-1-1** | **CEC-1-2** | **CEC-2-1** | **CEC-2-1** | | |
| Sample ID | CC-1 5-6 | CC-2 1-2 | CC-2 DUP 1-2 | CC-2 4-5 | CC-0 3-4 | CC-0 1-2 | CC-0 5-6 | CEC-1-1 0-4 | CEC-1-1 8-9.5 | CEC-1-2 0-4 | CEC-2-1 0-4 | CEC-2-1 8.8-10 | | |
| Sample Depth (feet) | 5-6 | 1-2 | 1-2 | 4-5 | 3-4 | 1-2 | 5-6 | 0-4 | 8-9.5 | 0-4 | 0-4 | 8.8-10 | | |
| Sample Date | 6/20/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/25/2024 | 4/29/2024 | 6/20/2024 | 11/9/2023 | 11/9/2023 | 12/5/2023 | 11/9/2023 | 11/9/2023 | | |
| Laboratory Sample ID | 24F0928-10 | 24D1045-10 | 24D1045-19 | 24D1045-16 | 24E0814-02 | 24D1045-08 | 24F0928-09 | 23K0414-01 | 23K0414-02 | 23L0197-04 | 23K0414-05 | 23K0414-06 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.3 | < 0.05 | < 0.06 | < 0.08 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.3 | < 0.05 | < 0.06 | < 0.08 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.3 | < 0.05 | < 0.06 | < 0.08 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.3 | < 0.05 | < 0.06 | < 0.08 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.3 | < 0.05 | < 0.06 | < 0.08 | -- | -- |
| PCB Aroclor 1254 | 0.6 | 0.2 | < 0.05 | 0.6 | 2.5 D | 0.08 | 0.2 | 0.1 | < 0.3 | 0.4 | < 0.06 | < 0.08 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.3 | < 0.05 | < 0.06 | < 0.08 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.3 | < 0.05 | < 0.06 | < 0.08 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.3 | < 0.05 | < 0.06 | < 0.08 | -- | -- |
| Total PCBs | 0.6 | 0.2 | -- | 0.6 | 2.5 | 0.08 | 0.2 | 0.1 | -- | 0.4 | -- | -- | 1 | 4 |

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | **MCP Concentrations** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **CEC-2-2** | **CEC-3-1** | **CEC-3-2** | **CEC-4-1** | **CEC-4-1** | **CEC-4-2** | **CEC-4-2** | **CEC-5-1** | **CEC-5-1** | **CEC-5-2** | **CEC-6-2** | **CEC-7-2** | | |
| Sample ID | CEC-2-2 0-4 | CEC-3-1 0-4 | CEC-3-2 0.3-4 | CEC-4-1 0-4 | CEC-4-1 8-10 | CEC-4-2 0-4 | CEC-4-2 4.5-7.5 | CEC-5-1 0-4 | CEC-5-1 8-10 | CEC-5-2 0-4 | CEC-6-2 0-4 | CEC-7-2 0-4 | | |
| Sample Depth (feet) | 0-4 | 0-4 | 0.3-4 | 0-4 | 8-10 | 0-4 | 4.5-5.75 | 0-4 | 8-10 | 0-4 | 0-4 | 0-4 | | |
| Sample Date | 12/6/2023 | 11/10/2023 | 12/6/2023 | 11/9/2023 | 11/9/2023 | 12/5/2023 | 12/5/2023 | 11/10/2023 | 11/10/2023 | 12/6/2023 | 12/6/2023 | 12/5/2023 | | |
| Laboratory Sample ID | 23L0197-12 | 23K0414-09 | 23L0197-11 | 23K0414-03 | 23K0414-04 | 23L0197-05 | 23L0197-06 | 23K0414-08 | 23K0414-07 | 23L0197-09 | 23L0197-10 | 23L0197-07 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 1.1 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 1.1 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 1.1 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 1.1 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | 0.2 | < 0.05 | < 0.05 | < 0.06 | < 1.1 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | 0.1 | 0.6 | < 0.05 | < 0.05 | < 0.06 | 11.2 D | < 0.05 | < 0.05 | < 0.06 | 0.06 | 0.09 | 0.4 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 1.1 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 1.1 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 1.1 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | -- | -- |
| Total PCBs | 0.1 | 0.8 | -- | -- | -- | 11.2 | -- | -- | -- | 0.06 | 0.09 | 0.4 | 1 | 4 |

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 2
Site 1 - Soil PCBs
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **CEC-7-2** | **CEC-7-2** | **CEC-8-2** | **CEC-8-2** | **D-0** | **D-0** | **D-0** | **D-1** | **D-1** | **D-1** | **D-2** | **D-3** | | |
| Sample ID | CEC-7-2 4-8 | CEC-7-2 8-10 | CEC-8-2 2-4 | CEC-8-2 4-8 | D-0 0-1 | D-0 1-2 | D-0 2-3 | D-1 0-1 | D-1 1-2 | D-1 2-3 | D-2 1-2 | D-3 0-1 | | |
| Sample Depth (feet) | 4-8 | 8-10 | 2-4 | 4-8 | 0-1 | 1-2 | 2-3 | 0-1 | 1-2 | 2-3 | 1-2 | 0-1 | | |
| Sample Date | 12/5/2024 | 12/5/2024 | 12/5/2023 | 12/5/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 5/2/2024 | 12/29/2023 | | |
| Laboratory Sample ID | 23L0197-08 | 23L0197-01 | 23L0197-02 | 23L0197-03 | 23L0933-01 | 23L0933-02 | 23L0933-03 | 23L0933-04 | 23L0933-05 | 23L0933-06 | 24E0125-08 | 23L0933-07 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | 0.3 | 0.3 | 6.9 D | 3.5 D | 0.3 | < 0.05 | < 0.05 | 0.2 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1260 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| Total PCBs | 0.3 | 0.3 | 6.9 | 3.5 | 0.3 | -- | -- | 0.2 | -- | -- | -- | -- | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **D-3** | **D-3** | **D-4** | **D-4** | **D-8.5** | **D0.5** | **DD-1** | **DD-1** | **DD-1** | **DD-2** | **DD-3** | **DD-5** | | |
| Sample ID | D-3 1-2 | D-3 2-3 | D-4 1-2 | D-4 4-5 | D-8.5 | D0.5 0-1 | DD-1 | DD-1 1-2 | DD-1 4-5 | DD-2 3-4 | DD-3 | DD-5 | | |
| Sample Depth (feet) | 1-2 | 2-3 | 1-2 | 4-5 | 0-5 | 0-1 | 0-5 | 1-2 | 4-5 | 3-4 | 0-5 | 0-5 | | |
| Sample Date | 12/29/2023 | 12/29/2023 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 7/17/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 6/20/2024 | 4/30/2024 | 4/30/2024 | | |
| Laboratory Sample ID | 23L0933-08 | 23L0933-09 | 24E0125-07 | 24E0125-09 | 24E0124-05 | 24G0736-04 | 24D1044-18 | 24D1045-09 | 24D1045-14 | 24F0928-12 | 24E0026-03 | 24E0026-02 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.1 | 0.08 | 0.1 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | < 0.05 | 0.2 | 0.09 | 0.1 | 0.1 | 0.8 | 0.6 | 0.4 | 0.4 | < 0.05 | 0.09 | 0.08 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| Total PCBs | -- | 0.2 | 0.09 | 0.1 | 0.1 | 0.8 | 0.7 | 0.48 | 0.5 | -- | 0.09 | 0.08 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **DD-7** | **DD0** | **DD0** | **E-1** | **E-1** | **E-1** | **E-1** | **E-2** | **E-2** | **E-2** | **E-3** | **E-3** | | |
| Sample ID | DD-7 | DD-0 1-2 | DD-0 4-5 | E-1 | E-1 0-1 | E-1 1-2 | E-1 4-5 | E-2 1-2 | E-2 DUP 1-2 | E-2 4-5 | E-3 0-3 | E-3 3-7 | | |
| Sample Depth (feet) | 0-5 | 1-2 | 4-5 | 0-5 | 0-1 | 1-2 | 4-5 | 1-2 | 1-2 | 4-5 | 0-3 | 3-7 | | |
| Sample Date | 4/30/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/3/2024 | 5/3/2024 | 5/3/2024 | 5/3/2024 | 5/3/2024 | | |
| Laboratory Sample ID | 24E0026-01 | 24D1045-07 | 24D1045-13 | 24E0124-08 | 24E0814-11 | 24E0125-10 | 24E0125-15 | 24E0126-01 | 24E0126-03 | 24E0126-02 | 24E0124-16 | 24E0124-17 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.05 | 0.4 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | < 0.05 | 0.06 | 0.8 | 0.1 | 0.3 | 0.09 | 0.3 | 0.07 | 0.07 | 0.2 | 0.1 | 0.2 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | 0.1 | < 0.05 | < 0.05 | 0.07 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| Total PCBs | -- | 0.06 | 1.2 | 0.1 | 0.3 | 0.09 | 0.4 | 0.07 | 0.07 | 0.27 | 0.1 | 0.2 | 1 | 4 |

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 2
Site 1 - Soil PCBs
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **E-5** | **E-7** | **E0** | **E0** | **E0** | **E0.5** | **E0.5 DUP** | **EE-1** | **EE-2** | **EE-8.5** | **EE0** | **EE0.5** | | |
| Sample ID | E-5 | E-7 | E-0 0-1 | E-0 1-2 | E-0 2-3 | E0.5 0-1 | E0.5 Dup | EE-1 3-4 | EE-2 3-4 | EE-8.5 | EE-0 1-2 | EE-0.5 | | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-1 | 1-2 | 2-3 | 0-1 | 0-1 | 3-4 | 3-4 | 0-5 | 1-2 | 0-5 | | |
| Sample Date | 5/2/2024 | 5/2/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 7/17/2024 | 7/17/2024 | 6/20/2024 | 6/20/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | | |
| Laboratory Sample ID | 24E0124-07 | 24E0124-06 | 23L0933-10 | 23L0933-11 | 23L0933-12 | 24G0736-05 | 24G0736-06 | 24F0928-08 | 24F0928-11 | 24D1044-13 | 24D1045-06 | 24D1044-14 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 1.1 | < 1.1 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 1.1 | < 1.1 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 1.1 | < 1.1 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 1.1 | < 1.1 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 1.1 | < 1.1 | < 0.06 | < 0.05 | 0.1 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1254 | 0.09 | < 0.06 | 0.1 | < 0.05 | < 0.05 | 19.9 D | 12.4 D | 0.1 | 0.2 | 0.2 | 0.3 | 0.08 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 1.1 | < 1.1 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 1.1 | < 1.1 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 1.1 | < 1.1 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| Total PCBs | 0.09 | -- | 0.1 | -- | -- | 19.9 | 12.4 | 0.1 | 0.2 | 0.3 | 0.3 | 0.08 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **F-0** | **F-0** | **F-0** | **F-0** | **F-1** | **F-1** | **F-2** | **F-2** | **F0.5** | **FF-1** | **FF-1** | **FF-1** | | |
| Sample ID | F-0 0-1 | F-0 1-2 | F-0 2-3 | F-0 3-4 | F-1 0-1 | F-1 1-2 | F-2 1-2 | F-2 4-5 | F-0.5 0-1 | FF-1 | FF-1 0-1 | FF-1 1-2 | | |
| Sample Depth (feet) | 0-1 | 1-2 | 2-3 | 3-4 | 0-1 | 1-2 | 1-2 | 4-5 | 0-1 | 0-5 | 0-1 | 1-2 | | |
| Sample Date | 12/29/2023 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 5/2/2024 | 5/2/2024 | 5/3/2024 | 5/3/2024 | 8/26/2024 | 4/29/2024 | 6/20/2024 | 6/20/2024 | | |
| Laboratory Sample ID | 23L0933-19 | 23L0933-13 | 23L0933-14 | 23L0933-15 | 24E0814-12 | 24E0125-12 | 24E0126-04 | 24E0126-05 | 24I0015-01 | 24D1044-12 | 24G0455-01 | 24F0928-06 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | 2.2 D | < 0.05 | < 0.05 | < 0.05 | 0.2 | 0.2 | 0.1 | 0.2 | 1 | 2.3 D | < 0.05 | 0.3 | -- | -- |
| PCB Aroclor 1260 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- |
| Total PCBs | 2.2 | -- | -- | -- | 0.2 | 0.2 | 0.1 | 0.2 | 1 | 2.3 | -- | 0.3 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **FF-1** | **FF-1** | **FF-1** | **FF-2** | **FF-2** | **FF-3** | **FF-5** | **FF-7** | **FF0** | **FF0 DUP** | **FF0** | **G-1** | | |
| Sample ID | FF-1 2-3 | FF-1 3-4 | FF-1 4-5 | FF-2 1-2 | FF-2 4-5 | FF-3 | FF-5 | FF-7 | FF-0 1-2 | FF-0 DUP 1-2 | FF-0 4-5 | G-1 | | |
| Sample Depth (feet) | 2-3 | 3-4 | 4-5 | 1-2 | 4-5 | 0-5 | 0-5 | 0-5 | 1-2 | 1-2 | 4-5 | 0-5 | | |
| Sample Date | 6/20/2024 | 6/20/2024 | 6/20/2024 | 6/20/2024 | 6/20/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | | |
| Laboratory Sample ID | 24G0455-02 | 24G0455-03 | 24F0927-08 | 24F0928-07 | 24F0927-09 | 24D1044-11 | 24D1044-10 | 24D1044-09 | 24D1045-05 | 24D1045-18 | 24D1045-12 | 24E0124-11 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | 0.08 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1254 | 0.09 | 9.1 D | < 0.06 | 0.08 | < 0.06 | < 0.05 | < 0.05 | 0.07 | < 0.05 | < 0.05 | < 0.05 | 0.2 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | 0.1 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| Total PCBs | 0.09 | 9.1 | -- | 0.08 | -- | -- | -- | 0.15 | -- | -- | -- | 0.3 | 1 | 4 |

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 2
Site 1 - Soil PCBs
New Bedford Marine Commerce Terminal
New Bedford, MA

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | **MCP Concentrations** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **G-1** | **G-1** | **G-1** | **G-2** | **G-2** | **G-3** | **G-3** | **G-5** | **G-7** | **G0** | **G0.5** | **GG-1** | | |
| Sample ID | G-1 0-1 | G-1 1-2 | G-1 4-5 | G-2 1-2 | G-2 4-5 | G-3 0-4 | G-3 4-8 | G-5 | G-7 | G0 0-1 | G-0.5 0-1 | GG-1 1-2 | | |
| Sample Depth (feet) | 0-1 | 1-2 | 4-5 | 1-2 | 4-5 | 0-4 | 4-8 | 0-5 | 0-5 | 0-1 | 0-1 | 1-2 | | |
| Sample Date | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/3/2024 | 5/3/2024 | 5/1/2024 | 5/1/2024 | 5/2/2024 | 5/2/2024 | 6/21/2024 | 8/26/2024 | 6/20/2024 | | |
| Laboratory Sample ID | 24E0814-13 | 24E0125-13 | 24E0125-16 | 24E0126-06 | 24E0126-07 | 24E0050-06 | 24E0050-07 | 24E0124-10 | 24E0124-09 | 24F0929-10 | 24I0015-02 | 24F0928-05 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | 0.1 | < 0.05 | 0.2 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1254 | 0.1 | 0.2 | 0.8 | 0.1 | 0.3 | < 0.05 | 0.1 | 0.1 | 0.2 | 0.4 | 0.9 | < 0.05 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.06 | 0.2 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | -- | -- |
| Total PCBs | 0.1 | 0.2 | 1 | 0.1 | 0.3 | -- | 0.2 | 0.1 | 0.4 | 0.4 | 0.9 | -- | 1 | 4 |

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | **MCP Concentrations** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **GG-1** | **GG-2** | **GG-2** | **GG0** | **H-0** | **H-0** | **H-0** | **H-1** | **H-1 DUP** | **H-1** | **H-8.5** | **H0.5** | | |
| Sample ID | GG-1 4-5 | GG-2 1-2 | GG-2 4-5 | GG-0 1-2 | H-0 0-1 | H-0 1-2 | H-0 2-3 | H-1 1-2 | H-1 DUP 1-2 | H-1 4-5 | H-8.5 | H-0.5 0-1 | | |
| Sample Depth (feet) | 4-5 | 1-2 | 4-5 | 1-2 | 0-1 | 1-2 | 2-3 | 1-2 | 1-2 | 4-5 | 0-5 | 0-1 | | |
| Sample Date | 6/20/2024 | 6/20/2024 | 6/20/2024 | 4/29/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 8/29/2024 | | |
| Laboratory Sample ID | 24F0927-07 | 24F0928-04 | 24F0927-06 | 24D1045-04 | 23L0933-16 | 23L0933-17 | 23L0933-18 | 24E0125-14 | 24E0125-11 | 24E0125-17 | 24E0124-12 | 24I0015-03 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | 0.2 | < 0.06 | < 0.06 | 0.07 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1254 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | 0.08 | 0.06 | 0.3 | 0.07 | 0.1 | 0.2 | 0.1 | 0.5 | -- | -- |
| PCB Aroclor 1260 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.05 | < 0.06 | -- | -- |
| Total PCBs | -- | -- | -- | -- | 0.08 | 0.06 | 0.5 | 0.07 | 0.1 | 0.27 | 0.1 | 0.5 | 1 | 4 |

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | **MCP Concentrations** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **HH-1** | **HH-3** | **HH-5** | **HH-7** | **HH0** | **HH0 DUP** | **HH0** | **HH0.5** | **HH-0.5** | **I-1** | **I-3** | **I-3** | | |
| Sample ID | HH-1 | HH-3 | HH-5 | HH-7 | HH-0 1-2 | HH-0 DUP 1-2 | HH-0 4-5 | HH-0.5 1-2 | HH-0.5 4-5 | I-1 | I-3 | **I-3 4-8** | | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-5 | 0-5 | 1-2 | 1-2 | 4-5 | 1-2 | 4-5 | 0-5 | 0-4 | 4-8 | | |
| Sample Date | 4/29/2024 | 4/30/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 6/20/2024 | 6/20/2024 | 5/2/2024 | 5/1/2024 | 6/21/2024 | | |
| Laboratory Sample ID | 24D1044-08 | 24E0026-04 | 24D1044-06 | 24D1044-05 | 24D1045-03 | 24D1045-17 | 24D1045-11 | 24F0928-03 | 24F0927-05 | 24E0124-15 | 24E0050-04 | 24F0927-02 | RCS-1 | RCS-2 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.05 | < 0.06 | 0.07 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1254 | 0.5 | 0.2 | < 0.06 | 0.09 | < 0.05 | < 0.05 | < 0.05 | 1.3 D | < 0.06 | < 0.05 | 0.1 | 0.3 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| Total PCBs | 0.5 | 0.2 | -- | 0.16 | -- | -- | -- | 1.3 | -- | -- | 0.1 | 0.3 | 1 | 4 |

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 2
Site 1 - Soil PCBs
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **I-5** | **I-7** | **I0.5** | **II-8.5** | **II-8.5** | **II0** | **II0.5** | **II0.5** | **II-0.5** | **J-0** | **J-0** | **J-0** | | |
| Sample ID | I-5 | I-7 | I-0.5 0-1 | II-8.5 | II-8.5 5-6 | II-0 1-2 | II-0.5 | II-0.5 1-2 | II-0.5 4-5 | J-0 0-1 | J-0 1-2 | J-0 2-3 | | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-1 | 0-5 | 5-6 | 1-2 | 0-5 | 1-2 | 4-5 | 0-1 | 1-2 | 2-3 | | |
| Sample Date | 5/2/2024 | 5/2/2024 | 8/29/2024 | 4/29/2024 | 5/3/2024 | 4/29/2024 | 4/29/2024 | 6/20/2024 | 6/20/2024 | 12/29/2023 | 12/29/2023 | 12/29/2023 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 24E0124-14 | 24E0124-13 | 24I0015-04 | 24D1044-03 | 24E0124-18 | 24D1045-01 | 24D1044-04 | 24F0928-02 | 24F0927-04 | 23L0931-13 | 23L0931-14 | 23L0931-15 | | |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | < 0.05 | 0.2 | < 0.06 | 0.1 | < 0.1 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1254 | 0.1 | 0.3 | 0.8 | 0.08 | < 0.1 | < 0.05 | 1.2 D | 0.4 | 0.09 | < 0.05 | < 0.06 | 0.2 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.06 | < 0.06 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.06 | -- | -- |
| Total PCBs | 0.1 | 0.5 | 0.8 | 0.18 | -- | -- | 1.2 | 0.4 | 0.09 | -- | -- | 0.2 | 1 | 4 |

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | MCP Concentrations | |
|---|---|---|---|---|---|---|---|---|
| Location | **J-0** | **JJ/II-2** | **JJ/II-6** | **JJ0** | **JJ0.5** | **JJ0.5** | | |
| Sample ID | J-0 3-4 | JJ/II-2 | JJ/II-6 | JJ-0 1-2 | JJ-0.5 1-2 | JJ-0.5 4-5 | | |
| Sample Depth (feet) | 3-4 | 0-5 | 0-5 | 1-2 | 1-2 | 4-5 | | |
| Sample Date | 12/29/2023 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 6/20/2024 | 6/20/2024 | RCS-1 | RCS-2 |
| Laboratory Sample ID | 23L0931-16 | 24D1044-02 | 24D1044-01 | 24D1045-02 | 24F0928-01 | 24F0927-03 | | |
| **PCBs (mg/kg)** | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1248 | 0.2 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1254 | 0.3 | < 0.05 | < 0.05 | < 0.05 | 0.1 | 0.6 | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | -- | -- |
| Total PCBs | 0.5 | -- | -- | -- | 0.1 | 0.6 | 1 | 4 |

Laboratory analytical results compared to RCS-1 and RCS-2 Massachusetts Contingency Plan Standards.
PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1
Exceeds MassDEP MCP RCS-1 and RCS-2

Table 3
Site 2 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| **Site 2 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | **CEC-1-4** | **CEC-10-4** | **CEC-14-4** | **CEC-15-4** | **CEC-2-3** | **CEC-2-4** | **CEC-3-3** | **CEC-4-3** | **CEC-5-3** | **CEC-5-4** | **CEC-6-3** | **CEC-6-3** | **CEC-6-4** | **MCP Concentrations** |
| Sample ID | CEC-1-4 | CEC-10-4 | CEC-14-4 | CEC-15-4 | CEC-2-3 | CEC-2-4 | CEC-3-3 | CEC-4-3 | CEC-5-3 | CEC-5-4 | CEC-6-3 | CEC-6-3 | CEC-6-4 | |
| Sample Depth (feet) | 0-4 | 0-5 | 0.6-4.6 | 0.6-4.6 | 0-6 | 0-4 | 0-4 | 0-4 | 0-4 | 0-4 | 0-4 | 5-7 | 0-4 | |
| Sample Date | 11/13/2023 | 9/19/2024 | 9/18/2024 | 9/18/2024 | 11/13/2023 | 11/13/2023 | 11/10/2023 | 11/10/2023 | 11/10/2023 | 11/13/2023 | 9/19/2024 | 9/19/2024 | 11/13/2023 | **RCS-1** |
| Laboratory Sample ID | 23K0441-01 | 24I0766-07 | 24I0766-02 | 24I0766-01 | 23K0440-04 | 23K0441-02 | 23K0440-01 | 23K0440-02 | 23K0440-03 | 23K0441-04 | 24I0766-10 | 24I0766-11 | 23K0441-03 | |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | |
| 1,1-Biphenyl | 0.05 | 0.03 | < 0.03 | < 0.03 | 0.08 D | < 0.05 | < 0.03 | 0.08 D | 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.05 | 0.05 |
| 2,4-Dinitrotoluene | < 0.28 | < 0.27 | < 0.27 | < 0.28 | < 0.55 | < 0.52 | < 0.28 | < 0.55 | < 0.28 | < 0.25 | < 0.28 | < 0.28 | < 0.54 | 0.7 |
| 2-Methylnaphthalene | < 0.28 | < 0.27 | < 0.27 | < 0.28 | < 0.55 | < 0.52 | < 0.28 | < 0.55 | < 0.28 | < 0.25 | < 0.28 | < 0.28 | < 0.54 | 0.7 |
| Acenaphthene | 0.55 | < 0.27 | < 0.27 | < 0.28 | 0.62 D | < 0.52 | < 0.28 | < 0.55 | < 0.28 | < 0.25 | < 0.28 | < 0.28 | < 0.54 | 4 |
| Acenaphthylene | < 0.28 | 0.65 | < 0.27 | 0.38 | < 0.55 | < 0.52 | < 0.28 | 2.60 D | 0.39 | < 0.25 | 0.59 | < 0.28 | < 0.54 | 2 |
| Anthracene | 0.97 | 0.95 | < 0.27 | 0.38 | 1.69 D | < 0.52 | < 0.28 | 4.89 D | 0.98 | < 0.25 | 0.41 | < 0.28 | < 0.54 | 1000 |
| Benzo(A)anthracene | 2.50 | 3.65 | 0.66 | 2.20 | 5.96 D | 0.70 D | < 0.28 | 13.50 D | 4.43 | 0.31 | 3.20 | < 0.28 | < 0.54 | 20 |
| Benzo(A)pyrene | 2.60 | 3.33 | 0.63 | 2.45 | 6.63 D | 0.81 D | < 0.28 | 13.20 D | 5.13 | 0.31 | 3.62 | < 0.28 | < 0.54 | 2 |
| Benzo(B)fluoranthene | 1.86 | 3.66 | 0.54 | 2.14 | 5.74 D | 0.64 D | < 0.28 | 10.00 D | 4.05 | 0.28 | 4.02 | < 0.28 | < 0.54 | 20 |
| Benzo(g,h,i)Perylene | 1.50 | 2.31 | 0.38 | 1.68 | 4.14 D | < 0.52 | < 0.28 | 6.80 D | 3.54 | < 0.25 | 2.47 | < 0.28 | < 0.54 | 1000 |
| Benzo(K)fluoranthene | 1.94 | 1.47 | 0.53 | 1.91 | 4.55 D | 0.62 D | < 0.28 | 10.50 D | 3.59 | < 0.25 | 1.56 | < 0.28 | < 0.54 | 200 |
| Chrysene | 2.51 | 3.70 | 0.64 | 2.00 | 5.63 D | 0.65 D | < 0.28 | 11.60 D | 4.21 | 0.30 | 3.02 | < 0.28 | < 0.54 | 200 |
| Dibenzo(A,H)anthracene | 0.38 | 0.41 | < 0.27 | 0.33 | 0.93 D | < 0.52 | < 0.28 | 1.81 D | 0.75 | < 0.25 | 0.44 | < 0.28 | < 0.54 | 2 |
| Dibenzofuran | 0.39 | < 0.27 | < 0.27 | < 0.28 | < 0.55 | < 0.52 | < 0.28 | 0.84 D | < 0.28 | < 0.25 | < 0.28 | < 0.28 | < 0.54 | -- |
| Fluoranthene | 4.32 | 5.97 | 1.71 | 4.88 | 10.10 D | 1.16 D | < 0.28 | 25.80 D | 8.45 | 0.63 | 5.24 | < 0.28 | < 0.54 | 1000 |
| Fluorene | 0.45 | 0.42 | < 0.27 | < 0.28 | 0.65 D | < 0.52 | < 0.28 | 0.88 D | 0.34 | < 0.25 | < 0.28 | < 0.28 | < 0.54 | 1000 |
| Indeno (1,2,3-cd) pyrene | 1.54 | 2.13 | 0.41 | 1.67 | 4.50 D | < 0.52 | < 0.28 | 7.93 D | 3.78 | < 0.25 | 2.51 | < 0.28 | < 0.54 | 20 |
| Naphthalene | < 0.28 | < 0.27 | < 0.27 | < 0.28 | 0.70 D | < 0.52 | < 0.28 | < 0.55 | < 0.28 | < 0.25 | < 0.28 | < 0.28 | < 0.54 | 4 |
| Phenanthrene | 4.37 | 3.71 | 0.92 | 1.11 | 6.32 D | 0.71 D | < 0.28 | 19.60 D | 3.20 | 0.43 | 0.87 | < 0.28 | < 0.54 | 10 |
| Pyrene | 5.24 | 7.21 | 1.12 | 3.33 | 11.60 D | 1.21 D | < 0.28 | 24.80 D | 9.13 | 0.59 | 5.25 | < 0.28 | < 0.54 | 1000 |
| **VPH (mg/kg)** | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.7 |
| Aliphatic Petroleum Hydrocarbons C19-C36 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Aliphatic Petroleum Hydrocarbons C5-C8 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Aliphatic Petroleum Hydrocarbons C9-C12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Aliphatic Petroleum Hydrocarbons C9-C18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Aromatic Petroleum Hydrocarbons C11-C22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Aromatic Petroleum Hydrocarbons C9-C10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Fluorene | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 |
| o-Xylenes | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Phenanthrene | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 10 |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1254 | < 0.06 | -- | -- | -- | < 0.05 | < 0.05 | < 0.06 | < 0.05 | 0.3 | < 0.05 | -- | -- | < 0.06 | -- |
| PCB Aroclor 1260 | < 0.06 | -- | -- | -- | < 0.05 | < 0.05 | < 0.06 | < 0.05 | 0.1 | < 0.05 | -- | -- | < 0.06 | -- |
| PCB Aroclor 1262 | < 0.06 | -- | -- | -- | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- | < 0.06 | -- |
| PCB Aroclor 1268 | < 0.06 | -- | -- | -- | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | -- | -- | < 0.06 | -- |
| Total PCBs | 0 | -- | -- | -- | 0 | 0 | 0 | 0 | 0.4 | 0 | -- | -- | 0 | 1 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | |
| Arsenic | 2.64 | -- | -- | -- | 3.42 | < 2.11 | < 2.31 | < 2.3 | < 2.13 | < 1.84 | -- | -- | < 1.83 | 20 |
| Barium | 39.2 | -- | -- | -- | 252 | 55.8 | 20.9 | 58 | 50.6 | 28.6 | -- | -- | 31.8 | 1000 |
| Beryllium | 0.32 | -- | -- | -- | 0.22 | 0.28 | 0.18 | 0.19 | 0.16 | 0.21 | -- | -- | 0.16 | 100 |
| Chromium | 13.8 | -- | -- | -- | 9.85 | 17 | 5.51 | 9.05 | 17.1 | 7.76 | -- | -- | 11 | 100 |
| Lead | 85.3 | -- | -- | -- | 113 | 43.2 | 7 | 101 | 86.5 | 113 | -- | -- | 27.2 | 200 |
| Mercury | 0.067 | -- | -- | -- | 0.096 | 0.055 | < 0.034 | 0.294 | 0.065 | 0.069 | -- | -- | 0.075 | 20 |
| Nickel | 8.95 | -- | -- | -- | 7.09 | 10 | 3.27 | 5.83 | 10.2 | 5.14 | -- | -- | 6.35 | 700 |
| Vanadium | 14.1 | -- | -- | -- | 15.4 | 26.6 | 10.3 | 11.1 | 15.7 | 13.3 | -- | -- | 12 | 500 |
| Zinc | 58.4 | -- | -- | -- | 181 | 51.2 | 15.3 | 75.7 | 43.3 | 34.1 | -- | -- | 26 | 1000 |

Notes:

Laboratory analytical results compared to RCS-1 Massachusetts Contingency Plan Standards.

SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls; VPH = Volatile Petroleum Hydrocarbons

All data reported in mg/kg = milligrams per kilogram.

D = identified in an analysis that has been diluted

< = not detected above laboratory reporting limit

-- = Not Tested

NS = No Standard

Exceeds MassDEP MCP RCS-1

Table 3
Site 2 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 2 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | MCP Concentrations |
|---|---|---|---|---|---|---|---|---|---|---|
| Location | **CEC-7-3** | **CEC-7-4** | **CEC-7-4** | **CEC-8-3** | **CEC-8-3** | **CEC-8-3** | **CEC-8-4** | **CEC-9-4** | **CEC-9-4** | |
| Sample ID | CEC-7-3 | CEC-7-4 | CEC-7-4 | CEC-8-3 | CEC-8-3 | CEC-8-3 | CEC-8-4 | CEC-9-4 | CEC-9-4 | |
| Sample Depth (feet) | 0-4 | 0-4 | 5-10 | 2-4 | 7-8 | 12-14.5 | 0-4 | 2-6 | 6-8 | |
| Sample Date | 9/19/2024 | 9/19/2024 | 9/19/2024 | 9/23/2024 | 9/23/2024 | 9/23/2024 | 9/19/2024 | 9/19/2024 | 9/19/2024 | RCS-1 |
| Laboratory Sample ID | 24I0766-09 | 24I0766-05 | 24I0766-06 | 24I0819-01 | 24I0819-02 | 24I0819-03 | 24I0766-08 | 24I0766-03 | 24I0766-04 | |
| **SVOCs (mg/kg)** | | | | | | | | | | |
| 1,1-Biphenyl | 0.06 | 0.04 | < 0.03 | < 0.03 | < 0.06 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 0.05 |
| 2,4-Dinitrotoluene | < 0.27 | < 0.28 | < 0.27 | < 0.29 | 1.13 | < 0.27 | < 0.27 | < 0.33 | < 0.28 | 0.7 |
| 2-Methylnaphthalene | < 0.27 | < 0.28 | < 0.27 | 4.47 | < 0.58 | < 0.27 | < 0.27 | < 0.33 | < 0.28 | 0.7 |
| Acenaphthene | 0.90 | 1.00 | < 0.27 | 0.54 | 1.31 | < 0.27 | < 0.27 | < 0.33 | < 0.28 | 4 |
| Acenaphthylene | 0.47 | 0.62 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | < 0.27 | < 0.33 | < 0.28 | 2 |
| Anthracene | 1.96 | 2.63 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | 0.29 | < 0.33 | < 0.28 | 1000 |
| Benzo(A)anthracene | 6.17 | 9.24 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | 0.86 | 0.34 | < 0.28 | 20 |
| Benzo(A)pyrene | 5.83 | 7.84 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | 0.95 | < 0.33 | < 0.28 | 2 |
| Benzo(B)fluoranthene | 6.72 | 7.96 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | 1.07 | 1.38 | < 0.28 | 20 |
| Benzo(g,h,i)Perylene | 3.39 | 4.38 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | 0.68 | 1.05 | < 0.28 | 1000 |
| Benzo(K)fluoranthene | 2.75 | 6.27 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | 0.40 | 0.60 | < 0.28 | 200 |
| Chrysene | 6.30 | 8.60 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | 0.86 | 0.52 | < 0.28 | 200 |
| Dibenzo(A,H)anthracene | 0.71 | 1.23 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | < 0.27 | < 0.33 | < 0.28 | 2 |
| Dibenzofuran | 0.51 | 0.43 | < 0.27 | < 0.29 | 0.63 | < 0.27 | < 0.27 | < 0.33 | < 0.28 | -- |
| Fluoranthene | 13.50 | 17.30 D | < 0.27 | < 0.29 | < 0.58 | < 0.27 | 1.75 | 0.54 | < 0.28 | 1000 |
| Fluorene | 0.80 | 0.93 | < 0.27 | 0.57 | 1.55 | < 0.27 | < 0.27 | < 0.33 | < 0.28 | 1000 |
| Indeno (1,2,3-cd) pyrene | 3.35 | 4.75 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | 0.65 | 0.97 | < 0.28 | 20 |
| Naphthalene | 0.39 | 0.29 | < 0.27 | < 0.29 | < 0.58 | < 0.27 | < 0.27 | < 0.33 | < 0.28 | 4 |
| Phenanthrene | 9.12 | 10.40 | < 0.27 | 1.21 | 3.06 | < 0.27 | 1.02 | 0.40 | < 0.28 | 10 |
| Pyrene | 12.00 | 16.90 D | < 0.27 | 0.33 | < 0.58 | < 0.27 | 1.62 | 0.38 | < 0.28 | 1000 |
| **VPH (mg/kg)** | | | | | | | | | | |
| 2-Methylnaphthalene | -- | -- | -- | -- | < 0.24 | 3.62 | -- | -- | -- | 0.7 |
| Aliphatic Petroleum Hydrocarbons C19-C36 | -- | -- | -- | -- | 85.6 | 39.7 | -- | -- | -- | -- |
| Aliphatic Petroleum Hydrocarbons C5-C8 | -- | -- | -- | -- | < 13.2 | 12.7 | -- | -- | -- | -- |
| Aliphatic Petroleum Hydrocarbons C9-C12 | -- | -- | -- | -- | 140 D | 42.8 D | -- | -- | -- | -- |
| Aliphatic Petroleum Hydrocarbons C9-C18 | -- | -- | -- | -- | 649 | 262 | -- | -- | -- | -- |
| Aromatic Petroleum Hydrocarbons C11-C22 | -- | -- | -- | -- | 344 | 158 | -- | -- | -- | -- |
| Aromatic Petroleum Hydrocarbons C9-C10 | -- | -- | -- | -- | 155 | 48 | -- | -- | -- | -- |
| Fluorene | -- | -- | -- | -- | 0.84 | < 0.43 | -- | -- | -- | 1000 |
| o-Xylenes | -- | -- | -- | -- | 1.17 | 0.31 | -- | -- | -- | -- |
| Phenanthrene | -- | -- | -- | -- | 1.71 | 0.94 | -- | -- | -- | 10 |
| **PCBs (mg/kg)** | | | | | | | | | | |
| PCB Aroclor 1254 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| PCB Aroclor 1260 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| PCB Aroclor 1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| PCB Aroclor 1268 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Total PCBs | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1 |
| **Total Metals (mg/kg)** | | | | | | | | | | |
| Arsenic | -- | -- | -- | -- | -- | -- | -- | -- | -- | 20 |
| Barium | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 |
| Beryllium | -- | -- | -- | -- | -- | -- | -- | -- | -- | 100 |
| Chromium | -- | -- | -- | -- | -- | -- | -- | -- | -- | 100 |
| Lead | -- | -- | -- | -- | -- | -- | -- | -- | -- | 200 |
| Mercury | -- | -- | -- | -- | -- | -- | -- | -- | -- | 20 |
| Nickel | -- | -- | -- | -- | -- | -- | -- | -- | -- | 700 |
| Vanadium | -- | -- | -- | -- | -- | -- | -- | -- | -- | 500 |
| Zinc | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1000 |

Notes:
Laboratory analytical results compared to RCS-1 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls; VPH = Volatile Petroleum Hydrocarbons
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceeds MassDEP MCP RCS-1

Table 4
Site 3 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 3 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | MCP Concentrations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | A'-1 | A'-3 | A'-5 | A'-7 | C'-1 | C'-3 | C'-5 | C'-7 | E'-1 | E'-3 | E'-5 | |
| Sample ID | A'-1 | A'-3 | A'-5 | A'-7 | C'-1 | C'-3 | C'-5 | C'-7 | E'-1 | E'-3 | E'-5 | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | |
| Sample Date | 7/1/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | |
| Laboratory Sample ID | 24G0131-07<br>24G0131-08 | 24G0131-09<br>24G0131-10 | 24G0131-11<br>24G0131-12 | 24G0131-13<br>24G0131-14 | 24G0132-05<br>24G0132-06 | 24G0132-03<br>24G0132-04 | 24G0132-01<br>24G0132-02 | 24G0132-19<br>24G0132-20 | 24G0132-11<br>24G0132-12 | 24G0132-13<br>24G0132-14 | 24G0132-15<br>24G0132-16 | RCS-2 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 6 |
| 2-Methylnaphthalene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 80 |
| Acenaphthene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 3000 |
| Acenaphthylene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 10 |
| Anthracene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 3000 |
| Benzo(A)anthracene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 300 |
| Benzo(A)pyrene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 30 |
| Benzo(B)fluoranthene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 300 |
| Benzo(g,h,i)Perylene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 3000 |
| Benzo(K)fluoranthene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 3000 |
| Chrysene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 3000 |
| Dibenzo(A,H)anthracene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 30 |
| Dibenzofuran | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | NS |
| Fluoranthene | 0.29 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 3000 |
| Fluorene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 3000 |
| Hydrocarbon, Oil, Petroleum | 41.4 | < 10.4 | 20 | 13.2 | < 10.5 | < 11.2 | 17.0 | 15.7 | < 11.1 | < 10.7 | < 11 | NS |
| Indeno (1,2,3-cd) pyrene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 300 |
| Naphthalene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 20 |
| Phenanthrene | < 0.27 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 1000 |
| Pyrene | 0.34 | < 0.26 | < 0.27 | < 0.26 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | 3000 |
| **Total SVOCs** | 42.02 | 0 | 20 | 13.2 | 0 | 0 | 17 | 15.7 | 0 | 0 | 0 | NS |
| **Total Metals (mg/kg)** | | | | | | | | | | | | |
| Arsenic | 2.35 | 2.27 | 2.45 | 2.18 | 2.33 | 2.51 | 2.21 | 2.52 | 2.37 | 2.40 | 2.67 | 20 |
| Barium | 9.00 | 11.7 | 10.5 | 10.6 | 22.8 | 9.16 | 30.8 | 10.0 | 11.1 | 8.78 | 8.01 | 3000 |
| Cadmium | < 0.47 | < 0.45 | < 0.49 | < 0.44 | < 0.47 | < 0.5 | < 0.44 | < 0.5 | < 0.47 | < 0.48 | < 0.53 | 80 |
| Chromium | 8.09 | 8.95 | 6.43 | 6.81 | 7.6 | 7.21 | 7.13 | 8.76 | 6.12 | 6.58 | 5.72 | 200 |
| Lead | 12.4 | 12.2 | 10 | 12.1 | 32.8 | 12.2 | 73.7 | 11.2 | 10.7 | 7.44 | 6.12 | 600 |
| Mercury | 0.05 | < 0.03 | < 0.03 | < 0.04 | 0.06 | < 0.04 | 0.05 | < 0.03 | < 0.03 | < 0.03 | < 0.04 | 40 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | |
| 4,4'-DDT | < 0.003 | < 0.003 | 0.010 | 0.007 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 30 |
| Dieldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.6 |
| **PCBs (mg/kg)** | | | | | | | | | | | | |
| PCB Aroclor 1248 | < 0.06 | < 0.05 | 0.10 | 0.10 | < 0.05 | < 0.06 | < 0.05 | 0.08 | < 0.05 | < 0.05 | < 0.05 | -- |
| PCB Aroclor 1254 | < 0.06 | 0.10 | 0.20 | 0.20 | < 0.05 | 0.10 | 0.20 | 0.30 | < 0.05 | < 0.05 | 0.10 | -- |
| **Total PCBs** | 0 | 0.10 | 0.31 | 0.31 | 0 | 0.10 | 0.20 | 0.38 | 0 | 0 | 0.10 | 4 |

Notes:
Laboratory analytical results compared to RCS-2 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
Exceeds MassDEP MCP RCS-2

Table 4
Site 3 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 3 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | MCP Concentrations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | E'-7 | K-1 | K-3 | K-4.5 | L/M-1 | L/M-4.5 | L0 | M0 | N0 | O-0.5 | Q-0.5 | |
| Sample ID | E'-7 | K-1 | K-3 | K-4.5 | L/M-1 | L/M-4.5 | L0 0-1 | M0 0-1 | N0 0-1 | O-0.5 | Q-0.5 | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-1 | 0-1 | 0-1 | 0-5 | 0-5 | |
| Sample Date | 7/1/2024 | 7/2/2024 | | 7/2/2024 | 7/2/2024 | 7/2/2024 | 7/17/2024 | 7/17/2024 | 7/17/2024 | 7/2/2024 | 7/1/2024 | |
| Laboratory Sample ID | 24G0132-17<br>24G0132-18 | 24G0130-03<br>24G0130-04 | 24G0130-07<br>24G0130-08 | 24G0130-09<br>24G0130-10 | 24G0130-05<br>24G0130-06 | 24G0130-11<br>24G0130-12 | 24G0738-01 | 24G0738-02 | 24G0738-03 | 24G0130-01<br>24G0130-02 | 24G0131-09<br>24G0131-10 | RCS-2 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | -- | -- | -- | 0.24 | < 0.03 | 6 |
| 2-Methylnaphthalene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | < 0.28 | < 0.28 | -- | -- | -- | 0.87 | < 0.26 | 80 |
| Acenaphthene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | < 0.28 | < 0.28 | -- | -- | -- | 2.09 | < 0.26 | 3000 |
| Acenaphthylene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | < 0.28 | < 0.28 | -- | -- | -- | 0.71 | < 0.26 | 10 |
| Anthracene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | < 0.28 | < 0.28 | -- | -- | -- | 7.84 | < 0.26 | 3000 |
| Benzo(A)anthracene | < 0.27 | 0.33 | < 0.27 | < 0.26 | 0.37 | 0.50 | -- | -- | -- | 15.1 D | < 0.26 | 300 |
| Benzo(A)pyrene | < 0.27 | 0.39 | < 0.27 | < 0.26 | 0.43 | 0.41 | -- | -- | -- | 13.2 | < 0.26 | 30 |
| Benzo(B)fluoranthene | < 0.27 | 0.33 | < 0.27 | < 0.26 | 0.35 | 0.34 | -- | -- | -- | 12.3 | < 0.26 | 300 |
| Benzo(g,h,i)Perylene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | 0.37 | < 0.281 | -- | -- | -- | 7.43 | < 0.26 | 3000 |
| Benzo(K)fluoranthene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | 0.35 | 0.39 | -- | -- | -- | 9.13 | < 0.26 | 3000 |
| Chrysene | < 0.27 | 0.33 | < 0.27 | < 0.26 | 0.38 | 0.51 | -- | -- | -- | 13.6 D | < 0.26 | 3000 |
| Dibenzo(A,H)anthracene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | < 0.28 | < 0.28 | -- | -- | -- | 1.89 | < 0.26 | 30 |
| Dibenzofuran | < 0.27 | < 0.29 | < 0.27 | < 0.26 | < 0.28 | < 0.28 | -- | -- | -- | 2.32 | < 0.26 | NS |
| Fluoranthene | < 0.27 | 0.48 | < 0.27 | 0.29 | 0.62 | 0.98 | -- | -- | -- | 32 D | < 0.26 | 3000 |
| Fluorene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | < 0.28 | < 0.28 | -- | -- | -- | 3.26 | < 0.26 | 3000 |
| Hydrocarbon, Oil, Petroleum | < 10.30 | 55.7 | 64.5 | 45.9 | 29.8 | 64.2 | -- | -- | -- | 72.2 | 15.90 | NS |
| Indeno (1,2,3-cd) pyrene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | 0.33 | < 0.28 | -- | -- | -- | 8.47 | < 0.26 | 300 |
| Naphthalene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | < 0.28 | < 0.28 | -- | -- | -- | 2.47 | < 0.26 | 20 |
| Phenanthrene | < 0.27 | < 0.29 | < 0.27 | < 0.26 | < 0.28 | < 0.28 | -- | -- | -- | 26.3 D | < 0.26 | 1000 |
| Pyrene | < 0.27 | 0.44 | < 0.27 | 0.28 | 0.59 | 0.80 | -- | -- | -- | 25.1 D | < 0.26 | 3000 |
| **Total SVOCs** | 0 | 58.0 | 64.5 | 46.47 | 34.96 | 69.53 | -- | -- | -- | 256.52 | 15.90 | NS |
| **Total Metals (mg/kg)** | | | | | | | | | | | | |
| Arsenic | 2.26 | 2.38 | 2.59 | 2.51 | 2.18 | 2.33 | -- | -- | -- | 2.59 | 2.23 | 20 |
| Barium | 10.6 | 77.3 | 28.4 | 32.9 | 104 | 16.8 | -- | -- | -- | 15.1 | 12.9 | 3000 |
| Cadmium | < 0.45 | < 0.48 | < 0.52 | < 0.5 | < 0.44 | < 0.47 | -- | -- | -- | < 0.52 | < 0.45 | 80 |
| Chromium | 7.58 | 10.3 | 9.71 | 10.2 | 10.5 | 7.29 | -- | -- | -- | 8.7 | 7.93 | 200 |
| Lead | 6.95 | 167 | 55.1 | 53.2 | 455 | 24.3 | -- | -- | -- | 48.3 | 31.4 | 600 |
| Mercury | < 0.03 | 0.06 | 0.07 | 0.06 | 0.07 | 0.05 | -- | -- | -- | 0.06 | 0.03 | 40 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | |
| 4,4'-DDT | < 0.003 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | 0.02 | 0.01 | 30 |
| Dieldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | 0.003 | < 0.003 | 0.6 |
| **PCBs (mg/kg)** | | | | | | | | | | | | |
| PCB Aroclor 1248 | < 0.05 | 0.08 | 0.10 | 0.07 | < 0.05 | 0.10 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | -- |
| PCB Aroclor 1254 | 0.07 | 0.20 | 0.10 | 0.20 | 0.10 | 0.10 | 2.9 D | 0.10 | 0.09 | 0.20 | 0.20 | -- |
| **Total PCBs** | 0.07 | 0.29 | 0.20 | 0.27 | 0.10 | 0.20 | 2.9 | 0.10 | 0.09 | 0.20 | 0.20 | 4 |

Notes:
Laboratory analytical results compared to RCS-2, S3 GW-2, and S3 GW-3 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
Exceeds MassDEP MCP RCS-2

Table 4
Site 3 - Soil All Parameters
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 3 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | | MCP Concentrations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Q-7 | S-0.5 | S-7 | U-0.5 | U-7 | W-0.5 | W-7 | Y-0.5 | Y-3 | Y-5 | Y-7 | |
| Sample ID | Q-7 | S-0.5 | S-7 | U-0.5 | U-7 | W-0.5 | W-7 | Y-0.5 | Y-3 | Y-5 | Y-7 | |
| Sample Depth (feet) | 0-10 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | |
| Sample Date | 7/2/2024 | 7/1/2024 | 7/2/2024 | 7/1/2024 | 7/2/2024 | 7/1/2024 | 7/2/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | 7/1/2024 | |
| Laboratory Sample ID | 24G0130-13<br>24G0130-14 | 24G0131-07<br>24G0131-08 | 24G0130-15<br>24G0130-16 | 24G0131-05<br>24G0131-06 | 24G0130-17<br>24G0130-18 | 24G0131-03<br>24G0131-04 | 24G0130-19<br>24G0130-20 | 24G0131-01<br>24G0131-02 | 24G0131-19<br>24G0131-20 | 24G0131-15<br>24G0131-16 | 24G0131-17<br>24G0131-18 | RCS-2 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 6 |
| 2-Methylnaphthalene | < 0.27 | < 0.28 | < 0.28 | < 0.27 | < 0.25 | < 0.25 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 80 |
| Acenaphthene | < 0.27 | < 0.28 | < 0.28 | < 0.27 | < 0.25 | < 0.25 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 3000 |
| Acenaphthylene | < 0.27 | < 0.28 | < 0.28 | < 0.27 | < 0.25 | < 0.25 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 10 |
| Anthracene | < 0.27 | 0.46 | < 0.28 | < 0.27 | < 0.25 | < 0.25 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 3000 |
| Benzo(A)anthracene | < 0.27 | 0.97 | < 0.28 | < 0.27 | < 0.25 | 0.41 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 300 |
| Benzo(A)pyrene | < 0.27 | 0.90 | < 0.28 | < 0.27 | < 0.25 | 0.51 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 30 |
| Benzo(B)fluoranthene | < 0.27 | 0.84 | < 0.28 | < 0.27 | < 0.25 | 0.34 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 300 |
| Benzo(g,h,i)Perylene | < 0.27 | 0.64 | < 0.28 | < 0.27 | < 0.25 | 0.45 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 3000 |
| Benzo(K)fluoranthene | < 0.27 | 0.75 | < 0.28 | < 0.27 | < 0.25 | 0.37 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 3000 |
| Chrysene | < 0.27 | 1.00 | < 0.28 | < 0.27 | < 0.25 | 0.44 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 3000 |
| Dibenzo(A,H)anthracene | < 0.27 | < 0.28 | < 0.28 | < 0.27 | < 0.25 | < 0.25 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 30 |
| Dibenzofuran | < 0.27 | < 0.28 | < 0.28 | < 0.27 | < 0.25 | < 0.25 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | NS |
| Fluoranthene | < 0.27 | 2.51 | < 0.28 | 0.52 | < 0.25 | 0.56 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 3000 |
| Fluorene | < 0.27 | < 0.28 | < 0.28 | < 0.27 | < 0.25 | < 0.254 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 3000 |
| Hydrocarbon, Oil, Petroleum | 30.9 | 18.8 | 11.4 | 26.1 | < 10.5 | 56.9 | < 10.6 | 46.1 | 25.2 | < 10.6 | 10.8 | NS |
| Indeno (1,2,3-cd) pyrene | < 0.27 | 0.62 | < 0.28 | < 0.27 | < 0.25 | 0.33 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 300 |
| Naphthalene | < 0.27 | < 0.28 | < 0.28 | < 0.27 | < 0.25 | < 0.25 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 20 |
| Phenanthrene | < 0.27 | 2.16 | < 0.28 | < 0.27 | < 0.25 | < 0.25 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 1000 |
| Pyrene | < 0.27 | 1.81 | < 0.28 | 0.45 | < 0.25 | 0.81 | < 0.25 | < 0.25 | < 0.26 | < 0.27 | < 0.26 | 3000 |
| **Total SVOCs** | 30.9 | 31.44 | 11.4 | 26.82 | 0 | 4.62 | 0 | 46.1 | 25.2 | 0 | 10.8 | NS |
| **Total Metals (mg/kg)** | | | | | | | | | | | | |
| Arsenic | 2.56 | 2.71 | 2.22 | 2.15 | 2.53 | 2.37 | 2.22 | 2.26 | 2.13 | 2.17 | 2.47 | 20 |
| Barium | 13 | 20.9 | 11.7 | 19.3 | 10.1 | 24 | 6.88 | 11 | 8.96 | 7.84 | 8.04 | 3000 |
| Cadmium | < 0.51 | < 0.54 | < 0.44 | < 0.43 | < 0.51 | < 0.47 | < 0.44 | < 0.45 | < 0.43 | < 0.43 | < 0.49 | 80 |
| Chromium | 8.35 | 15.3 | 11 | 14 | 5.74 | 21.5 | 6.42 | 6.65 | 5.41 | 5.38 | 6.87 | 200 |
| Lead | 17 | 47.6 | 14.1 | 43.3 | 7.9 | 36.2 | 9.57 | 11 | 14.4 | 7.24 | 7.14 | 600 |
| Mercury | 0.10 | 0.131 | < 0.03 | 0.11 | < 0.03 | 0.04 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 40 |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | |
| 4,4'-DDT | 0.010 | 0.024 | 0.009 | 0.01 | 0.003 | 0.01 | 0.003 | 0.005 | < 0.003 | < 0.003 | 0.004 | 30 |
| Dieldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.6 |
| **PCBs (mg/kg)** | | | | | | | | | | | | |
| PCB Aroclor 1248 | 0.09 | 0.20 | 0.06 | < 0.05 | < 0.05 | 0.10 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | -- |
| PCB Aroclor 1254 | 0.20 | 0.60 | 0.10 | 0.20 | < 0.05 | 0.30 | < 0.05 | < 0.05 | < 0.05 | 0.07 | < 0.05 | -- |
| **Total PCBs** | 0.29 | 0.80 | 0.16 | 0.20 | 0.00 | 0.41 | 0 | 0 | 0 | 0.07 | 0 | 4 |

Notes:
Laboratory analytical results compared to RCS-2, S3 GW-2, and S3 GW-3 Massachusetts Contingency Plan Standards.
SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
All data reported in mg/kg = milligrams per kilogram.
D = identified in an analysis that has been diluted
< = not detected above laboratory reporting limit
-- = Not Tested
Exceeds MassDEP MCP RCS-2

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | A-1 | A-3 | A-5 | A-7 | AA-8.5 | BB-1 | BB-3 | BB-5 | BB-7 | C-1 | | | | |
| Sample ID | A-1 | A-3 | A-5 | A-7 | AA-8.5 | BB-1 | BB-3 | BB-5 | BB-7 | C-1 | | | | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-4 | 0-4 | | | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 5/2/2024 | | | | |
| Laboratory Sample ID | 24E0050-03 | 24E0050-02 | 24E0050-01 | 24E0050-05 | 24E0026-09 | 24E0026-08 | 24E0026-07 | 24E0026-06 | 24E0026-05 | 24E0124-01 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,1,1-Trichloroethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 30 | 600 | -- | -- |
| 1,1,2,2-Tetrachloroethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.005 | 0.02 | -- | -- |
| 1,1,2-Trichloroethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.1 | 2 | -- | -- |
| 1,1-Dichloroethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.4 | 9 | -- | -- |
| 1,1-Dichloroethylene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 3 | 40 | -- | -- |
| 1,1-Dichloropropene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,2,3-Trichlorobenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,2,3-Trichloropropane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 2 | 6 | -- | -- |
| 1,2-Dibromo-3-chloropropane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,2-Dibromoethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichlorobenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 9 | 100 | -- | -- |
| 1,2-Dichloroethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichloropropane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,3,4-Trimethylbenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,3,5-Trimethylbenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,3-Dichlorobenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 3 | 200 | -- | -- |
| 1,3-Dichloropropane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,4-Dioxane | < 0.086 | < 0.096 | < 0.095 | < 0.12 | < 0.092 | < 0.111 | < 0.098 | < 0.101 | < 0.094 | < 0.108 | 0.2 | 5 | -- | -- |
| 2,2-Dichloropropane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 4-Isopropyltoluene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Acetone | < 0.043 | < 0.048 | < 0.048 | < 0.0599 | < 0.046 | < 0.056 | < 0.049 | < 0.050 | < 0.047 | < 0.054 | 6 | 50 | -- | -- |
| Benzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 2 | 200 | -- | -- |
| Bromobenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Bromochloromethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Bromodichloromethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| Bromoform | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.1 | 1 | -- | -- |
| Bromomethane | < 0.009 | < 0.010 | < 0.010 | < 0.012 | < 0.009 | < 0.011 | < 0.010 | < 0.010 | < 0.009 | < 0.011 | 0.5 | 0.5 | -- | -- |
| Carbon Disulfide | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Carbon Tetrachloride | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 5 | 5 | -- | -- |
| Chlorobenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 1 | 3 | -- | -- |
| Chlorodibromomethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.005 | 0.03 | -- | -- |
| Chloroethane | < 0.009 | < 0.010 | < 0.010 | < 0.012 | < 0.009 | < 0.011 | < 0.010 | < 0.010 | < 0.009 | < 0.011 | -- | -- | -- | -- |
| Chloroform | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.2 | 0.2 | -- | -- |
| Cis-1,2-dichloroethylene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| cis-1,3-Dichloropropene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Dibromomethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Dichlorodifluoromethane | < 0.009 | < 0.010 | < 0.010 | < 0.012 | < 0.009 | < 0.011 | < 0.010 | < 0.010 | < 0.009 | < 0.011 | -- | -- | -- | -- |
| Dichloromethane | < 0.022 | < 0.024 | < 0.024 | < 0.03 | < 0.023 | < 0.028 | < 0.025 | < 0.025 | < 0.024 | < 0.027 | 0.1 | 3 | -- | -- |
| Diisopropyl Ether | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Ethyl benzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 40 | 1000 | -- | -- |
| Ethyl ether | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Ethyl tert-butyl ether | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Fluorotrichloromethane | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Hexachlorobutadiene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 30 | 100 | -- | -- |
| Hexachloroethane | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.7 | 3 | -- | -- |
| Isopropyl benzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| m,p-Xylenes | < 0.009 | < 0.010 | < 0.010 | < 0.012 | < 0.009 | < 0.011 | < 0.010 | < 0.010 | < 0.009 | < 0.011 | -- | -- | -- | -- |
| Methyl Chloride | < 0.009 | < 0.010 | < 0.010 | < 0.012 | < 0.009 | < 0.011 | < 0.010 | < 0.010 | < 0.009 | < 0.011 | -- | -- | -- | -- |
| Methyl ethyl ketone | < 0.043 | < 0.048 | < 0.048 | < 0.060 | < 0.046 | < 0.056 | < 0.049 | < 0.050 | < 0.047 | < 0.054 | 4 | 50 | -- | -- |
| Methyl isobutyl ketone | < 0.043 | < 0.048 | < 0.048 | < 0.060 | < 0.046 | < 0.056 | < 0.049 | < 0.050 | < 0.047 | < 0.054 | 0.4 | 50 | -- | -- |
| Methyl n-butyl ketone | < 0.043 | < 0.048 | < 0.048 | < 0.060 | < 0.046 | < 0.056 | < 0.049 | < 0.050 | < 0.047 | < 0.054 | -- | -- | -- | -- |
| Methyl-tert-butyl ether | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.1 | 100 | -- | -- |
| n-Butylbenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| n-Propylbenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Naphthalene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 4 | 20 | -- | -- |
| O-chlorotoluene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| o-Xylenes | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| p-Chlorotoluene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| P-dichlorobenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.7 | 1 | -- | -- |
| sec-Butylbenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Styrene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 3 | 4 | -- | -- |
| Tert-amyl-methyl ether | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| tert-Butylbenzene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Tetrachloroethylene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 1 | 4 | -- | -- |
| Tetrahydrofuran | < 0.017 | < 0.019 | < 0.019 | < 0.024 | < 0.018 | < 0.022 | < 0.020 | < 0.020 | < 0.019 | < 0.022 | -- | -- | -- | -- |
| Toluene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 30 | 1000 | -- | -- |
| Trans-1,2-dichloroethylene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 1 | 1 | -- | -- |
| trans-1,3-Dichloropropene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Trichloroethylene | < 0.004 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.3 | 0.3 | -- | -- |
| Vinyl Chloride | < 0.009 | < 0.010 | < 0.010 | < 0.012 | < 0.009 | < 0.011 | < 0.010 | < 0.010 | < 0.009 | < 0.011 | 0.3 | 0.7 | -- | -- |
| Xylene | < 0.009 | < 0.010 | < 0.010 | < 0.012 | < 0.009 | < 0.011 | < 0.010 | < 0.010 | < 0.009 | < 0.011 | 100 | 100 | -- | -- |
| Total VOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -- | -- | 10 | 4 |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | A-1 | A-3 | A-5 | A-7 | AA-8.5 | BB-1 | BB-3 | BB-5 | BB-7 | C-1 | | | | |
| Sample ID | A-1 | A-3 | A-5 | A-7 | AA-8.5 | BB-1 | BB-3 | BB-5 | BB-7 | C-1 | | | | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-4 | 0-4 | | | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 5/2/2024 | | | | |
| Laboratory Sample ID | 24E0050-03 | 24E0050-02 | 24E0050-01 | 24E0050-05 | 24E0026-09 | 24E0026-08 | 24E0026-07 | 24E0026-06 | 24E0026-05 | 24E0124-01 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 0.05 | 6 | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 2 | 6 | -- | -- |
| 1,2-Dichlorobenzene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 9 | 100 | -- | -- |
| 1,3-Dichlorobenzene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 3 | 200 | -- | -- |
| 2,4,5-Trichlorophenol | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 4 | 600 | -- | -- |
| 2,4,6-Trichlorophenol | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 20 | -- | -- |
| 2,4-Dichlorophenol | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 40 | -- | -- |
| 2,4-Dimethylphenol | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 100 | -- | -- |
| 2,4-Dinitrophenol | < 1.15 | < 1.11 | < 1.12 | < 1.12 | < 1.10 | < 1.11 | < 1.15 | < 1.10 | < 1.11 | < 1.11 | 3 | 50 | -- | -- |
| 2,4-Dinitrotoluene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 10 | -- | -- |
| 2,6-Dinitrotoluene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| 2-Chloronaphthalene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| 2-Chlorophenol | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 100 | -- | -- |
| 2-Methylnaphthalene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 80 | -- | -- |
| 2-Methylphenol | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| 2-Nitrophenol | < 0.57 | < 0.55 | < 0.56 | < 0.56 | < 0.55 | < 0.56 | < 0.58 | < 0.55 | < 0.56 | < 0.55 | -- | -- | -- | -- |
| 3 & 4 Methylphenol | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| 3,3'-Dichlorobenzidine | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 3 | 20 | -- | -- |
| 4-Bromophenyl phenyl ether | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| 4-Nitrophenol | < 1.15 | < 1.11 | < 1.12 | < 1.12 | < 1.10 | < 1.11 | < 1.15 | < 1.1 | < 1.11 | < 1.11 | -- | -- | -- | -- |
| Acenaphthene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 4 | 3000 | -- | -- |
| Acenaphthylene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.48 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 2 | 10 | -- | -- |
| Acetophenone | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| Aniline | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| Anthracene | < 0.29 | 1.41 | < 0.28 | < 0.28 | 0.67 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 1000 | 3000 | -- | -- |
| Azobenzene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| Benzo(A)anthracene | 0.33 | 7.33 | 0.51 | < 0.28 | 2.38 | 0.45 | 0.32 | 0.28 | < 0.28 | < 0.28 | 20 | 300 | -- | -- |
| Benzo(A)pyrene | 0.35 | 7.30 | 0.52 | < 0.28 | 2.33 | 0.49 | 0.32 | 0.30 | < 0.28 | < 0.28 | 2 | 30 | -- | -- |
| Benzo(B)fluoranthene | < 0.29 | 6.25 | 0.39 | < 0.28 | 2.53 | 0.52 | 0.35 | 0.29 | < 0.28 | < 0.28 | 20 | 300 | -- | -- |
| Benzo(g,h,i)Perylene | 0.45 | 4.44 | 0.37 | < 0.28 | 1.52 | 0.36 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 1000 | 3000 | -- | -- |
| Benzo(K)fluoranthene | < 0.29 | 4.84 | 0.32 | < 0.28 | 0.97 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 200 | 3000 | -- | -- |
| bis (2-chloroethoxy) Methane | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| bis (2-chloroethyl) Ether | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 0.7 | -- | -- |
| bis (2-chloroisopropyl) Ether | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 0.7 | -- | -- |
| Bis (2-ethylhexyl) phthalate | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | 0.40 | 100 | 700 | -- | -- |
| Butylbenzylphthalate | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| Chrysene | 0.31 | 6.28 | 0.48 | < 0.28 | 2.27 | 0.44 | 0.34 | 0.31 | < 0.28 | < 0.28 | 200 | 3000 | -- | -- |
| Di-n-octyl phthalate | < 0.57 | < 0.55 | < 0.56 | < 0.56 | < 0.55 | < 0.56 | < 0.58 | < 0.55 | < 0.56 | < 0.55 | -- | -- | -- | -- |
| Dibenzo(A,H)anthracene | < 0.29 | 1.28 | < 0.28 | < 0.28 | 0.35 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 2 | 30 | -- | -- |
| Dibenzofuran | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| Diethyl phthalate | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 10 | 200 | -- | -- |
| Dimethyl phthalate | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 50 | -- | -- |
| Fluoranthene | 0.69 | 10.00 | 0.92 | < 0.28 | 5.39 | 0.87 | 0.60 | 0.50 | 0.42 | < 0.28 | 1000 | 3000 | -- | -- |
| Fluorene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 1000 | 3000 | -- | -- |
| Hexachlorobenzene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 0.9 | -- | -- |
| Hexachlorobutadiene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 30 | 100 | -- | -- |
| Hexachloroethane | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 3 | -- | -- |
| Indeno (1,2,3-cd) pyrene | < 0.29 | 5.31 | 0.34 | < 0.28 | 1.46 | 0.35 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 20 | 300 | -- | -- |
| Isophorone | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| N-dibutyl phthalate | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| n-Nitrosodimethylamine | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| Naphthalene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 4 | 20 | -- | -- |
| Nitrobenzene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| P-chloroaniline | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 1 | 3 | -- | -- |
| P-dichlorobenzene | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.7 | 1 | -- | -- |
| Pentachlorophenol | < 1.15 | < 1.11 | < 1.12 | < 1.12 | < 1.1 | < 1.11 | < 1.15 | < 1.1 | < 1.11 | < 1.11 | 3 | 10 | -- | -- |
| Phenanthrene | 0.37 | 3.82 | 0.58 | < 0.28 | 2.83 | 0.47 | 0.34 | 0.29 | < 0.28 | < 0.28 | 10 | 1000 | -- | -- |
| Phenols | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | 0.9 | 20 | -- | -- |
| Pyrene | 0.64 | 9.49 | 1.07 | < 0.28 | 4.59 | 0.74 | 0.54 | 0.51 | 0.40 | < 0.28 | 1000 | 3000 | -- | -- |
| Pyridine | < 0.29 | < 0.28 | < 0.28 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | < 0.28 | < 0.28 | -- | -- | -- | -- |
| **Total SVOCs** | 3.15 | 67.75 | 5.51 | 0 | 27.77 | 4.70 | 2.82 | 2.48 | 0.81 | 0.40 | -- | -- | 100 | 100 |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | |
| C9-C36 | 31.3 | 36.2 | 39.1 | 14 | 66.4 | 42.5 D | 21.9 | 16.4 | 18.8 | < 11 | -- | -- | -- | -- |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| **Site 1 - New Bedford Marine Commerce Terminal, New Bedford, Massachusetts** | | | | | | | | | | | **MCP Concentrations** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | A-1 | A-3 | A-5 | A-7 | AA-8.5 | BB-1 | BB-3 | BB-5 | BB-7 | C-1 | | | | |
| Sample ID | A-1 | A-3 | A-5 | A-7 | AA-8.5 | BB-1 | BB-3 | BB-5 | BB-7 | C-1 | | | | |
| Sample Depth (feet) | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-5 | 0-4 | 0-4 | | | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/1/2024 | 5/1/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 5/2/2024 | | | | |
| Laboratory Sample ID | 24E0050-03 | 24E0050-02 | 24E0050-01 | 24E0050-05 | 24E0026-09 | 24E0026-08 | 24E0026-07 | 24E0026-06 | 24E0026-05 | 24E0124-01 | **RCS-1** | **RCS-2** | **Landfills Lined** | **Landfills Unlined** |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | |
| 2,2-Dichloropropionic acid | < 0.049 | < 0.048 | < 0.048 | < 0.051 | < 0.048 | < 0.049 | < 0.049 | < 0.05 | < 0.049 | < 0.05 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxyacetic acid | < 0.01 | < 0.01 | < 0.01 | < 0.011 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxypropionic acid | < 0.01 | < 0.01 | < 0.01 | < 0.011 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | -- | -- | -- | -- |
| 2,4-Dichlorophenoxyacetic acid | < 0.05 | < 0.05 | < 0.05 | < 0.052 | < 0.049 | < 0.05 | < 0.051 | < 0.052 | < 0.051 | < 0.051 | -- | -- | -- | -- |
| 2-(2-Methyl-1,4-chlorophenoxy) propionic acid | < 2.51 | 2.48 | 2.48 | 2.62 | < 2.47 | < 2.52 | < 2.56 | < 2.58 | < 2.54 | < 2.56 | -- | -- | -- | -- |
| 4,4'-DDD | < 0.003 | < 0.003 | < 0.003 | 0.01 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 10 | 40 | -- | -- |
| 4,4'-DDE | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 7 | 30 | -- | -- |
| 4,4'-DDT | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 7 | 30 | -- | -- |
| 4-(2,4-dichlorophenoxy)-Butanoic acid | < 0.051 | < 0.050 | < 0.050 | < 0.053 | < 0.050 | < 0.051 | < 0.052 | < 0.052 | < 0.051 | < 0.052 | -- | -- | -- | -- |
| Aldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.5 | -- | -- |
| beta-BHC | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-delta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-gamma | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | 0.003 | 0.5 | -- | -- |
| Chlordane (mixture of isomers) | < 0.022 | < 0.022 | < 0.022 | < 0.022 | < 0.021 | < 0.023 | < 0.021 | < 0.023 | < 0.022 | < 0.021 | -- | -- | -- | -- |
| Chlordane, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Dicamba | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| chloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | < 0.050 | < 0.050 | < 0.050 | < 0.052 | < 0.049 | < 0.050 | < 0.051 | < 0.052 | < 0.051 | < 0.051 | -- | -- | -- | -- |
| Dieldrin | < 0.003 | 0.003 | 0.007 | < 0.003 | 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.6 | -- | -- |
| Dinoseb | < 0.051 | < 0.050 | < 0.050 | < 0.053 | < 0.050 | < 0.051 | < 0.052 | < 0.052 | < 0.051 | < 0.052 | -- | -- | -- | -- |
| Endosulfan sulfate | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, beta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 20 | 30 | -- | -- |
| Endrin ketone | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Heptachlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.3 | 2 | -- | -- |
| Heptachlor Epoxide | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.2 | 1 | -- | -- |
| Hexachlorobenzene | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.7 | 0.9 | -- | -- |
| Methoxychlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 300 | 400 | -- | -- |
| Methylchlorophenoxyacetic acid | < 2.480 | < 2.450 | < 2.450 | < 2.590 | < 2.450 | < 2.490 | < 2.530 | < 2.550 | < 2.510 | < 2.540 | -- | -- | -- | -- |
| Toxaphene | < 0.139 | < 0.136 | < 0.137 | < 0.140 | < 0.130 | < 0.144 | < 0.134 | < 0.141 | < 0.138 | < 0.133 | -- | -- | -- | -- |
| trans-Chlordane | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | 0.08 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.06 | < 0.05 | 0.1 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1254 | 0.1 | 0.3 | 0.1 | 0.3 | 0.2 | 0.6 | 0.2 | 0.07 | 0.06 | 0.2 | -- | -- | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | 0.1 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | | | | |
| PCB Aroclor 1262 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.06 | -- | -- | -- | -- |
| **Total PCBs** | 0.1 | 0.3 | 0.1 | 0.4 | 0.2 | 0.7 | 0.2 | 0.07 | 0.14 | 0.2 | 1 | 4 | < 2 | < 2 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | |
| Arsenic | 2.52 | 4.04 | 2.93 | 4.2 | 3.2 | 2.36 | 2.84 | 2.75 | 2.74 | 3.84 | 20 | 20 | 40 | 40 |
| Barium | 10.6 | 63.4 | 21 | 37.5 | 21.8 | 17.5 | 20.7 | 11.7 | 24 | 15.4 | 1000 | 3000 | -- | -- |
| Cadmium | < 0.41 | 0.52 | < 0.38 | < 0.42 | < 0.4 | < 0.39 | < 0.44 | < 0.42 | < 0.44 | < 0.41 | 80 | 80 | 80 | 30 |
| Chromium | 7.77 | 24.2 | 8.58 | 7.62 | 5.85 | 10.6 | 10.1 | 8.38 | 4.85 | 13.2 | 100 | 200 | 1000 | 1000 |
| Lead | 15.8 | 164 | 72.7 | 105 | 125 | 34 | 39.3 | 20.6 | 96 | 53.3 | 200 | 600 | 2000 | 1000 |
| Mercury | 0.06 | 0.118 | 0.15 | 0.44 | 0.20 | 0.08 | 0.13 | 0.08 | < 0.04 | < 0.04 | 20 | 40 | 10 | 10 |
| Selenium | < 4.09 | < 4.12 | < 3.79 | < 4.17 | < 4.02 | < 3.92 | < 4.43 | < 4.17 | < 4.44 | < 4.08 | 400 | 800 | -- | -- |
| Silver | < 0.41 | < 0.41 | < 0.38 | < 0.42 | < 0.4 | < 0.39 | < 0.44 | < 0.42 | < 0.44 | < 0.41 | 100 | 200 | -- | -- |
| **TCLP (mg/L)** | | | | | | | | | | | | | | |
| Lead TCLP (mg/L) | -- | 0.94 | -- | 1.12 | 1.9 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **General Chemistry** | | | | | | | | | | | | | | |
| Corrosivity (pH) | 7.9 | 8.08 | 8.34 | 8.48 | 6.91 | 7.79 | 8.31 | 7.7 | 6.72 | 8.02 | -- | -- | -- | -- |
| **Physical Conditions** | | | | | | | | | | | | | | |
| Flashpoint ($^{o}$F) | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | -- | -- | -- | -- |
| Reactivity - Cyanide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | -- | -- | -- | -- |
| Reactivity - Sulfide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | -- | -- | -- | -- |
| Specific Conductance @ 25$^{o}$C (µmhos/cm) | 50 | 134 | 141 | 51 | 8 | 255 | 89 | 49 | 9 | 123 | -- | -- | 8000 | 4000 |

Notes:
Laboratory analytical results compared to RCS-1, RCS-2, Massachusetts Contingency Plan Standards and Massachusetts COMM-97 Landfill standards.
VOCs = Volatile Organic Carbons; SVOCs = Semi-Volatile Organic Carbons; PCBs = Polychlorinated Biphenyls
D = identified in an analysis that has been diluted
P = pesticide target analyte had a % difference > 25% between 2 GC columns
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceedance of MassDEP MCP RCS-1
Exceedance of MassDEP MCP RCS-1 & RCS-2
Exceedance of COMM-97 - Lined Landfill criteria
Exceedance of COMM-97 - Unlined Landfill criteria

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | C-3 | C-5 | C-7 | D-8.5 | DD-1 | DD-3 | DD-5 | DD-7 | E-1 | E-3 | | | | |
| Sample ID | C-3 | C-5 | C-7 | D-8.5 | DD-1 | DD-3 | DD-5 | DD-7 | E-1 | E-3 0-3 | | | | |
| Sample Depth (feet) | 0-4.8 | 0-5 | 0-4.3 | 0-4 | 0-5 | 0-5 | 0-4.5 | 0-3 | 0-5 | 0-3 | | | | |
| Sample Date | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 5/2/2024 | 5/3/2024 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| Laboratory Sample ID | 24E0124-02 | 24E0124-03 | 24E0124-04 | 24E0124-05 | 24D1044-18 | 24E0026-03 | 24E0026-02 | 24E0026-01 | 24E0124-08 | 24E0124-16 | | | | |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.1 | 0.1 | -- | -- |
| 1,1,1-Trichloroethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 30 | 600 | -- | -- |
| 1,1,2,2-Tetrachloroethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.005 | 0.02 | -- | -- |
| 1,1,2-Trichloroethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.1 | 2 | -- | -- |
| 1,1-Dichloroethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.4 | 9 | -- | -- |
| 1,1-Dichloroethylene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 3 | 40 | -- | -- |
| 1,1-Dichloropropene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.608 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| 1,2,3-Trichlorobenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| 1,2,3-Trichloropropane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 2 | 6 | -- | -- |
| 1,2-Dibromo-3-chloropropane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 1.52 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| 1,2-Dibromoethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichlorobenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 9 | 100 | -- | -- |
| 1,2-Dichloroethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichloropropane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.1 | 0.1 | -- | -- |
| 1,3,4-Trimethylbenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| 1,3,5-Trimethylbenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| 1,3-Dichlorobenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 3 | 200 | -- | -- |
| 1,3-Dichloropropane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| 1,4-Dioxane | < 0.107 | < 0.098 | < 0.131 | < 0.126 | < 0.093 | < 0.091 | < 0.101 | < 30.4 | < 0.106 | < 0.131 | 0.2 | 5 | -- | -- |
| 2,2-Dichloropropane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| 4-Isopropyltoluene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Acetone | < 0.054 | < 0.049 | < 0.065 | < 0.063 | < 0.047 | < 0.045 | < 0.051 | < 1.52 | < 0.053 | < 0.066 | 6 | 50 | -- | -- |
| Benzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 2 | 200 | -- | -- |
| Bromobenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Bromochloromethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Bromodichloromethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.1 | 0.1 | -- | -- |
| Bromoform | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.1 | 1 | -- | -- |
| Bromomethane | < 0.011 | < 0.010 | < 0.013 | < 0.013 | < 0.009 | < 0.009 | < 0.010 | < 0.304 | < 0.011 | < 0.013 | 0.5 | 0.5 | -- | -- |
| Carbon Disulfide | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Carbon Tetrachloride | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 5 | 5 | -- | -- |
| Chlorobenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 1 | 3 | -- | -- |
| Chlorodibromomethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.005 | 0.03 | -- | -- |
| Chloroethane | < 0.011 | < 0.010 | < 0.013 | < 0.013 | < 0.009 | < 0.009 | < 0.010 | < 0.304 | < 0.011 | < 0.013 | -- | -- | -- | -- |
| Chloroform | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.2 | 0.2 | -- | -- |
| Cis-1,2-dichloroethylene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.1 | 0.1 | -- | -- |
| cis-1,3-Dichloropropene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Dibromomethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Dichlorodifluoromethane | < 0.011 | < 0.010 | < 0.013 | < 0.013 | < 0.009 | < 0.009 | < 0.010 | < 0.304 | < 0.011 | < 0.013 | -- | -- | -- | -- |
| Dichloromethane | < 0.027 | < 0.025 | < 0.033 | < 0.032 | < 0.023 | < 0.023 | < 0.025 | < 0.608 | < 0.027 | < 0.033 | 0.1 | 3 | -- | -- |
| Diisopropyl Ether | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Ethyl benzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 40 | 1000 | -- | -- |
| Ethyl ether | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Ethyl tert-butyl ether | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Fluorotrichloromethane | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Hexachlorobutadiene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 30 | 100 | -- | -- |
| Hexachloroethane | -- | -- | -- | -- | -- | -- | -- | < 0.304 | -- | -- | 0.7 | 3 | -- | -- |
| Isopropyl benzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| m,p-Xylenes | < 0.011 | < 0.010 | < 0.013 | < 0.013 | < 0.009 | < 0.009 | < 0.010 | < 0.608 | < 0.011 | < 0.013 | -- | -- | -- | -- |
| Methyl Chloride | < 0.011 | < 0.010 | < 0.013 | < 0.013 | < 0.009 | < 0.009 | < 0.010 | < 0.304 | < 0.011 | < 0.013 | -- | -- | -- | -- |
| Methyl ethyl ketone | < 0.054 | < 0.049 | < 0.065 | < 0.063 | < 0.047 | < 0.045 | < 0.051 | < 1.52 | < 0.053 | < 0.066 | 4 | 50 | -- | -- |
| Methyl isobutyl ketone | < 0.054 | < 0.049 | < 0.065 | < 0.063 | < 0.047 | < 0.045 | < 0.051 | < 1.52 | < 0.053 | < 0.066 | 0.4 | 50 | -- | -- |
| Methyl n-butyl ketone | < 0.054 | < 0.049 | < 0.065 | < 0.063 | < 0.047 | < 0.045 | < 0.051 | < 1.52 | < 0.053 | < 0.066 | -- | -- | -- | -- |
| Methyl-tert-butyl ether | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.1 | 100 | -- | -- |
| n-Butylbenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| n-Propylbenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Naphthalene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | 0.857 | < 0.005 | < 0.007 | 4 | 20 | -- | -- |
| O-chlorotoluene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| o-Xylenes | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| p-Chlorotoluene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| P-dichlorobenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.7 | 1 | -- | -- |
| sec-Butylbenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Styrene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 3 | 4 | -- | -- |
| Tert-amyl-methyl ether | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| tert-Butylbenzene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Tetrachloroethylene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 1 | 4 | -- | -- |
| Tetrahydrofuran | < 0.022 | < 0.020 | < 0.026 | < 0.025 | < 0.019 | < 0.018 | < 0.020 | < 1.52 | < 0.021 | < 0.026 | -- | -- | -- | -- |
| Toluene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 30 | 1000 | -- | -- |
| Trans-1,2-dichloroethylene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 1 | 1 | -- | -- |
| trans-1,3-Dichloropropene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | -- | -- | -- | -- |
| Trichloroethylene | < 0.005 | < 0.005 | < 0.007 | < 0.006 | < 0.005 | < 0.005 | < 0.005 | < 0.304 | < 0.005 | < 0.007 | 0.3 | 0.3 | -- | -- |
| Vinyl Chloride | < 0.011 | < 0.010 | < 0.013 | < 0.013 | < 0.009 | < 0.009 | < 0.010 | < 0.304 | < 0.011 | < 0.013 | 0.3 | 0.7 | -- | -- |
| Xylene | < 0.011 | < 0.010 | < 0.013 | < 0.013 | < 0.009 | < 0.009 | < 0.010 | < 0.608 | < 0.011 | < 0.013 | 100 | 100 | -- | -- |
| Total VOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.857 | 0 | 0 | -- | -- | 10 | 4 |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | C-3 | C-5 | C-7 | D-8.5 | DD-1 | DD-3 | DD-5 | DD-7 | E-1 | E-3 | | | | |
| Sample ID | C-3 | C-5 | C-7 | D-8.5 | DD-1 | DD-3 | DD-5 | DD-7 | E-1 | E-3 0-3 | | | | |
| Sample Depth (feet) | 0-4.8 | 0-5 | 0-4.3 | 0-4 | 0-5 | 0-5 | 0-4.5 | 0-3 | 0-5 | 0-3 | | | | |
| Sample Date | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 5/2/2024 | 5/3/2024 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| Laboratory Sample ID | 24E0124-02 | 24E0124-03 | 24E0124-04 | 24E0124-05 | 24D1044-18 | 24E0026-03 | 24E0026-02 | 24E0026-01 | 24E0124-08 | 24E0124-16 | | | | |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 0.08 | < 0.03 | < 0.03 | 0.05 | 6 | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 2 | 6 | -- | -- |
| 1,2-Dichlorobenzene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 9 | 100 | -- | -- |
| 1,3-Dichlorobenzene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 3 | 200 | -- | -- |
| 2,4,5-Trichlorophenol | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 4 | 600 | -- | -- |
| 2,4,6-Trichlorophenol | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 20 | -- | -- |
| 2,4-Dichlorophenol | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 40 | -- | -- |
| 2,4-Dimethylphenol | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 100 | -- | -- |
| 2,4-Dinitrophenol | < 1.05 | < 1.04 | < 1.06 | < 1.08 | < 1.16 | < 1.08 | < 1.11 | < 1.08 | < 1.15 | < 1.06 | 3 | 50 | -- | -- |
| 2,4-Dinitrotoluene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 10 | -- | -- |
| 2,6-Dinitrotoluene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| 2-Chloronaphthalene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| 2-Chlorophenol | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 100 | -- | -- |
| 2-Methylnaphthalene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | 0.31 | < 0.29 | < 0.27 | 0.7 | 80 | -- | -- |
| 2-Methylphenol | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| 2-Nitrophenol | < 0.52 | < 0.52 | < 0.53 | < 0.54 | < 0.58 | < 0.54 | < 0.56 | < 0.54 | < 0.57 | < 0.53 | -- | -- | -- | -- |
| 3 & 4 Methylphenol | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| 3,3'-Dichlorobenzidine | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 3 | 20 | -- | -- |
| 4-Bromophenyl phenyl ether | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| 4-Nitrophenol | < 1.05 | < 1.04 | < 1.06 | < 1.08 | < 1.16 | < 1.08 | < 1.11 | < 1.08 | < 1.15 | < 1.06 | -- | -- | -- | -- |
| Acenaphthene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 4 | 3000 | -- | -- |
| Acenaphthylene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | 0.75 | < 0.29 | < 0.27 | 2 | 10 | -- | -- |
| Acetophenone | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| Aniline | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| Anthracene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 0.53 | < 0.27 | < 0.28 | 0.60 | < 0.29 | < 0.27 | 1000 | 3000 | -- | -- |
| Azobenzene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| Benzo(A)anthracene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 0.76 | < 0.27 | < 0.28 | 1.02 | 1.00 | 0.29 | 20 | 300 | -- | -- |
| Benzo(A)pyrene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 0.69 | < 0.27 | < 0.28 | 0.93 | 1.17 | 0.32 | 2 | 30 | -- | -- |
| Benzo(B)fluoranthene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 0.72 | < 0.27 | < 0.28 | 1.04 | 0.93 | 0.36 | 20 | 300 | -- | -- |
| Benzo(g,h,i)Perylene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 0.41 | < 0.27 | < 0.28 | 0.51 | 0.84 | < 0.27 | 1000 | 3000 | -- | -- |
| Benzo(K)fluoranthene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 0.29 | < 0.27 | < 0.28 | 0.41 | 0.85 | < 0.27 | 200 | 3000 | -- | -- |
| bis (2-chloroethoxy) Methane | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| bis (2-chloroethyl) Ether | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 0.7 | -- | -- |
| bis (2-chloroisopropyl) Ether | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 0.7 | -- | -- |
| Bis (2-ethylhexyl) phthalate | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 100 | 700 | -- | -- |
| Butylbenzylphthalate | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | 0.39 | < 0.27 | -- | -- | -- | -- |
| Chrysene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 0.72 | < 0.27 | < 0.28 | 1.02 | 0.93 | 0.32 | 200 | 3000 | -- | -- |
| Di-n-octyl phthalate | < 0.52 | < 0.52 | < 0.53 | < 0.54 | < 0.58 | < 0.54 | < 0.56 | < 0.54 | < 0.57 | < 0.53 | -- | -- | -- | -- |
| Dibenzo(A,H)anthracene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 2 | 30 | -- | -- |
| Dibenzofuran | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | 0.43 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| Diethyl phthalate | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 10 | 200 | -- | -- |
| Dimethyl phthalate | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 50 | -- | -- |
| Fluoranthene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 1.85 | < 0.27 | < 0.28 | 3.07 | 1.48 | 0.53 | 1000 | 3000 | -- | -- |
| Fluorene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | 0.59 | < 0.29 | < 0.27 | 1000 | 3000 | -- | -- |
| Hexachlorobenzene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 0.9 | -- | -- |
| Hexachlorobutadiene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 30 | 100 | -- | -- |
| Hexachloroethane | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 3 | -- | -- |
| Indeno (1,2,3-cd) pyrene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 0.40 | < 0.27 | < 0.28 | 0.55 | 0.92 | < 0.27 | 20 | 300 | -- | -- |
| Isophorone | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| N-dibutyl phthalate | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| n-Nitrosodimethylamine | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| Naphthalene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | 0.79 | < 0.29 | < 0.27 | 4 | 20 | -- | -- |
| Nitrobenzene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| P-chloroaniline | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 1 | 3 | -- | -- |
| P-dichlorobenzene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.7 | 1 | -- | -- |
| Pentachlorophenol | < 1.05 | < 1.04 | < 1.06 | < 1.08 | < 1.16 | < 1.08 | < 1.11 | < 1.08 | < 1.15 | < 1.06 | 3 | 10 | -- | -- |
| Phenanthrene | < 0.26 | < 0.26 | < 0.26 | < 0.27 | 1.97 | < 0.27 | < 0.28 | 3.23 | 0.56 | 0.27 | 10 | 1000 | -- | -- |
| Phenols | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | 0.9 | 20 | -- | -- |
| Pyrene | < 0.26 | < 0.26 | 0.32 | < 0.27 | 1.51 | 0.27 | < 0.28 | 2.20 | 1.48 | 0.52 | 1000 | 3000 | -- | -- |
| Pyridine | < 0.26 | < 0.26 | < 0.26 | < 0.27 | < 0.29 | < 0.27 | < 0.28 | < 0.27 | < 0.29 | < 0.27 | -- | -- | -- | -- |
| **Total SVOCs** | 0 | 0 | 0.58 | 0 | 9.85 | 0.27 | 0 | 17.53 | 10.55 | 2.59 | -- | -- | 100 | 100 |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | |
| C9-C36 | < 10.8 | 19.1 | < 10.8 | < 11.6 | 19.8 | 146 D | < 10.5 | 53.2 | 72.3 D | 36.8 | -- | -- | -- | -- |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | C-3 | C-5 | C-7 | D-8.5 | DD-1 | DD-3 | DD-5 | DD-7 | E-1 | E-3 | | | | |
| Sample ID | C-3 | C-5 | C-7 | D-8.5 | DD-1 | DD-3 | DD-5 | DD-7 | E-1 | E-3 0-3 | | | | |
| Sample Depth (feet) | 0-4.8 | 0-5 | 0-4.3 | 0-4 | 0-5 | 0-5 | 0-4.5 | 0-3 | 0-5 | 0-3 | | | | |
| Sample Date | 5/2/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/30/2024 | 4/30/2024 | 4/30/2024 | 5/2/2024 | 5/3/2024 | | | | |
| Laboratory Sample ID | 24E0124-02 | 24E0124-03 | 24E0124-04 | 24E0124-05 | 24D1044-18 | 24E0026-03 | 24E0026-02 | 24E0026-01 | 24E0124-08 | 24E0124-16 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | |
| 2,2-Dichloropropionic acid | < 0.047 | < 0.047 | < 0.047 | < 0.049 | < 0.049 | < 0.048 | < 0.048 | < 0.048 | < 0.050 | < 0.047 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxyacetic acid | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxypropionic acid | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| 2,4-Dichlorophenoxyacetic acid | < 0.049 | < 0.049 | < 0.049 | < 0.051 | < 0.051 | < 0.05 | < 0.049 | < 0.050 | < 0.052 | < 0.048 | -- | -- | -- | -- |
| 2-(2-Methyl-1,4-chlorophenoxy) propionic acid | < 2.45 | < 2.44 | < 2.44 | < 2.54 | < 2.53 | < 2.49 | < 2.470 | < 2.490 | < 2.590 | < 2.410 | -- | -- | -- | -- |
| 4,4'-DDD | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 10 | 40 | -- | -- |
| 4,4'-DDE | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 7 | 30 | -- | -- |
| 4,4'-DDT | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 7 | 30 | -- | -- |
| 4-(2,4-dichlorophenoxy)-Butanoic acid | < 0.050 | < 0.049 | < 0.049 | < 0.051 | < 0.051 | < 0.050 | < 0.050 | < 0.050 | < 0.052 | < 0.049 | -- | -- | -- | -- |
| Aldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.5 | -- | -- |
| beta-BHC | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-delta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-gamma | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | 0.003 | 0.5 | -- | -- |
| Chlordane (mixture of isomers) | < 0.022 | < 0.022 | < 0.021 | < 0.022 | < 0.023 | < 0.021 | < 0.021 | < 0.022 | < 0.021 | < 0.021 | -- | -- | -- | -- |
| Chlordane, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Dicamba | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| chloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | < 0.049 | < 0.049 | < 0.049 | < 0.051 | < 0.051 | < 0.050 | < 0.049 | < 0.050 | < 0.052 | < 0.048 | -- | -- | -- | -- |
| Dieldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.6 | -- | -- |
| Dinoseb | < 0.050 | < 0.049 | < 0.049 | < 0.051 | < 0.051 | < 0.050 | < 0.050 | < 0.050 | < 0.052 | < 0.049 | -- | -- | -- | -- |
| Endosulfan sulfate | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, beta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 20 | 30 | -- | -- |
| Endrin ketone | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Heptachlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.3 | 2 | -- | -- |
| Heptachlor Epoxide | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.2 | 1 | -- | -- |
| Hexachlorobenzene | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.7 | 0.9 | -- | -- |
| Methoxychlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 300 | 400 | -- | -- |
| Methylchlorophenoxyacetic acid | < 2.420 | < 2.420 | < 2.420 | < 2.510 | < 2.500 | < 2.470 | < 2.450 | < 2.470 | < 2.560 | < 2.390 | -- | -- | -- | -- |
| Toxaphene | < 0.136 | < 0.135 | < 0.128 | < 0.136 | < 0.143 | < 0.128 | < 0.133 | < 0.136 | < 0.134 | < 0.134 | -- | -- | -- | -- |
| trans-Chlordane | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.0026 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.1 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1254 | 0.08 | 0.1 | < 0.05 | 0.1 | 0.6 | 0.09 | 0.08 | < 0.05 | 0.1 | 0.1 | -- | -- | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | | | | |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | -- | -- | -- | -- |
| **Total PCBs** | 0.08 | 0.1 | 0 | 0.1 | 0.7 | 0.09 | 0.08 | 0 | 0.1 | 0.1 | 1 | 4 | < 2 | < 2 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | |
| Arsenic | 4.05 | 2.96 | 1.71 | 1.77 | 7.09 | 2.35 | 1.31 | 2.86 | 6.72 | 5.39 | 20 | 20 | 40 | 40 |
| Barium | 14.1 | 15 | 9.04 | 22.1 | 37.8 | 15.2 | 5.93 | 8.73 | 216 | 31.9 | 1000 | 3000 | -- | -- |
| Cadmium | < 0.36 | < 0.39 | < 0.4 | < 0.43 | < 0.39 | < 0.37 | < 0.4 | < 0.39 | < 0.39 | < 0.36 | 80 | 80 | 80 | 30 |
| Chromium | 6.84 | 5.88 | 4.11 | 4.17 | 23.3 | 10.8 | 4.29 | 4.36 | 26.7 | 11.1 | 100 | 200 | 1000 | 1000 |
| Lead | 24.6 | 169 | 10.9 | 73.8 | 76.2 | 19.5 | 9.18 | 5.02 | 676 | 188 | 200 | 600 | 2000 | 1000 |
| Mercury | < 0.04 | 0.04 | < 0.04 | 0.09 | 0.08 | 0.06 | 0.04 | < 0.03 | 0.24 | 0.15 | 20 | 40 | 10 | 10 |
| Selenium | < 3.6 | < 3.93 | < 4.03 | < 4.29 | < 3.92 | < 3.68 | < 3.96 | < 3.85 | < 3.92 | < 3.64 | 400 | 800 | -- | -- |
| Silver | < 0.36 | < 0.39 | < 0.4 | < 0.43 | < 0.39 | < 0.37 | < 0.4 | < 0.39 | 0.53 | < 0.36 | 100 | 200 | -- | -- |
| **TCLP (mg/L)** | | | | | | | | | | | | | | |
| Lead TCLP (mg/L) | -- | 0.58 | -- | 0.54 | -- | -- | -- | -- | 2.63 | 0.17 | -- | -- | -- | -- |
| **General Chemistry** | | | | | | | | | | | | | | |
| Corrosivity (pH) | 7.75 | 7.68 | 7.46 | 7.11 | 6.62 | 8.06 | 8.95 | 7.95 | 8.5 | 7.96 | -- | -- | -- | -- |
| **Physical Conditions** | | | | | | | | | | | | | | |
| Flashpoint ($^{o}$F) | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | -- | -- | -- | -- |
| Reactivity - Cyanide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | -- | -- | -- | -- |
| Reactivity - Sulfide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | -- | -- | -- | -- |
| Specific Conductance @ 25$^{o}$C (µmhos/cm) | 59 | 186 | 36 | 35 | 30 | 57 | 59 | 72 | 145 | 124 | -- | -- | 8000 | 4000 |

Notes:
Laboratory analytical results compared to RCS-1, RCS-2,
VOCs = Volatile Organic Carbons; SVOCs = Semi-Volat
D = identified in an analysis that has been diluted
P = pesticide target analyte had a % difference > 25% bet
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceedance of MassDEP MCP RCS-1
Exceedance of MassDEP MCP RCS-1 & RCS-2
Exceedance of COMM-97 - Lined Landfill criteria
Exceedance of COMM-97 - Unlined Landfill criteria

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | E-3 | E-5 | E-7 | EE-0.5 | EE-8.5 | FF-1 | FF-3 | FF-5 | FF-7 | G-1 | | | | |
| Sample ID | E-3 3-7 | E-5 | E-7 | EE-0.5 | EE-8.5 | FF-1 | FF-3 | FF-5 | FF-7 | G-1 | | | | |
| Sample Depth (feet) | 3-7 | 0-4.3 | 0-4.5 | 0-3.5 | 0-4.5 | 0-5 | 0-4 | 0-4 | 0-3.5 | 0-5 | | | | |
| Sample Date | 5/3/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | | | | |
| Laboratory Sample ID | 24E0124-17 | 24E0124-07 | 24E0124-06 | 24D1044-14 | 24D1044-13 | 24D1044-12 | 24D1044-11 | 24D1044-10 | 24D1044-09 | 24E0124-11 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.1 | 0.1 | -- | -- |
| 1,1,1-Trichloroethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 30 | 600 | -- | -- |
| 1,1,2,2-Tetrachloroethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.005 | 0.02 | -- | -- |
| 1,1,2-Trichloroethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.1 | 2 | -- | -- |
| 1,1-Dichloroethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.4 | 9 | -- | -- |
| 1,1-Dichloroethylene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 3 | 40 | -- | -- |
| 1,1-Dichloropropene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| 1,2,3-Trichlorobenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| 1,2,3-Trichloropropane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 2 | 6 | -- | -- |
| 1,2-Dibromo-3-chloropropane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| 1,2-Dibromoethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichlorobenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 9 | 100 | -- | -- |
| 1,2-Dichloroethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichloropropane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.1 | 0.1 | -- | -- |
| 1,3,4-Trimethylbenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| 1,3,5-Trimethylbenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| 1,3-Dichlorobenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 3 | 200 | -- | -- |
| 1,3-Dichloropropane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| 1,4-Dioxane | < 0.116 | < 0.121 | < 0.135 | < 0.136 | < 0.096 | < 0.090 | < 0.090 | < 0.092 | < 0.095 | < 0.111 | 0.2 | 5 | -- | -- |
| 2,2-Dichloropropane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| 4-Isopropyltoluene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Acetone | < 0.058 | < 0.060 | < 0.068 | < 0.068 | < 0.048 | < 0.045 | < 0.045 | < 0.046 | < 0.047 | < 0.055 | 6 | 50 | -- | -- |
| Benzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 2 | 200 | -- | -- |
| Bromobenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Bromochloromethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Bromodichloromethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.1 | 0.1 | -- | -- |
| Bromoform | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.1 | 1 | -- | -- |
| Bromomethane | < 0.012 | < 0.012 | < 0.014 | < 0.014 | < 0.010 | < 0.009 | < 0.009 | < 0.009 | < 0.010 | < 0.011 | 0.5 | 0.5 | -- | -- |
| Carbon Disulfide | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Carbon Tetrachloride | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 5 | 5 | -- | -- |
| Chlorobenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 1 | 3 | -- | -- |
| Chlorodibromomethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.005 | 0.03 | -- | -- |
| Chloroethane | < 0.012 | < 0.012 | < 0.014 | < 0.014 | < 0.010 | < 0.009 | < 0.009 | < 0.009 | < 0.010 | < 0.011 | -- | -- | -- | -- |
| Chloroform | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.2 | 0.2 | -- | -- |
| Cis-1,2-dichloroethylene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 0.1 | 0.1 | -- | -- |
| cis-1,3-Dichloropropene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Dibromomethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Dichlorodifluoromethane | < 0.012 | < 0.012 | < 0.014 | < 0.014 | < 0.010 | < 0.009 | < 0.009 | < 0.009 | < 0.010 | < 0.011 | -- | -- | -- | -- |
| Dichloromethane | < 0.029 | < 0.030 | < 0.034 | < 0.034 | < 0.024 | < 0.023 | < 0.023 | < 0.023 | < 0.024 | < 0.028 | 0.1 | 3 | -- | -- |
| Diisopropyl Ether | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Ethyl benzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 40 | 1000 | -- | -- |
| Ethyl ether | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Ethyl tert-butyl ether | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Fluorotrichloromethane | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Hexachlorobutadiene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | 30 | 100 | -- | -- |
| Hexachloroethane | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.7 | 3 | -- | -- |
| Isopropyl benzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| m,p-Xylenes | < 0.012 | < 0.012 | < 0.014 | < 0.014 | < 0.010 | < 0.009 | < 0.009 | < 0.009 | < 0.010 | < 0.011 | -- | -- | -- | -- |
| Methyl Chloride | < 0.012 | < 0.012 | < 0.014 | < 0.014 | < 0.010 | < 0.009 | < 0.009 | < 0.009 | < 0.010 | < 0.011 | -- | -- | -- | -- |
| Methyl ethyl ketone | < 0.058 | < 0.060 | < 0.068 | < 0.068 | < 0.048 | < 0.045 | < 0.0452 | < 0.046 | < 0.047 | < 0.055 | 4 | 50 | -- | -- |
| Methyl isobutyl ketone | < 0.058 | < 0.060 | < 0.068 | < 0.068 | < 0.048 | < 0.045 | < 0.0452 | < 0.046 | < 0.047 | < 0.055 | 0.4 | 50 | -- | -- |
| Methyl n-butyl ketone | < 0.058 | < 0.060 | < 0.068 | < 0.068 | < 0.048 | < 0.045 | < 0.0452 | < 0.046 | < 0.047 | < 0.055 | -- | -- | -- | -- |
| Methyl-tert-butyl ether | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | 0.1 | 100 | -- | -- |
| n-Butylbenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| n-Propylbenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Naphthalene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | 4 | 20 | -- | -- |
| O-chlorotoluene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| o-Xylenes | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| p-Chlorotoluene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| P-dichlorobenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | 0.7 | 1 | -- | -- |
| sec-Butylbenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Styrene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | 3 | 4 | -- | -- |
| Tert-amyl-methyl ether | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| tert-Butylbenzene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Tetrachloroethylene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | 1 | 4 | -- | -- |
| Tetrahydrofuran | < 0.023 | < 0.024 | < 0.027 | < 0.027 | < 0.019 | < 0.018 | < 0.0181 | < 0.018 | < 0.019 | < 0.022 | -- | -- | -- | -- |
| Toluene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | 30 | 1000 | -- | -- |
| Trans-1,2-dichloroethylene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | 1 | 1 | -- | -- |
| trans-1,3-Dichloropropene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | -- | -- | -- | -- |
| Trichloroethylene | < 0.006 | < 0.006 | < 0.007 | < 0.007 | < 0.005 | < 0.005 | < 0.0045 | < 0.005 | < 0.005 | < 0.006 | 0.3 | 0.3 | -- | -- |
| Vinyl Chloride | < 0.012 | < 0.012 | < 0.014 | < 0.014 | < 0.010 | < 0.009 | < 0.009 | < 0.009 | < 0.010 | < 0.011 | 0.3 | 0.7 | -- | -- |
| Xylene | < 0.012 | < 0.012 | < 0.014 | < 0.014 | < 0.010 | < 0.009 | < 0.009 | < 0.009 | < 0.010 | < 0.011 | 100 | 100 | -- | -- |
| Total VOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -- | -- | 10 | 4 |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | E-3 | E-5 | E-7 | EE-0.5 | EE-8.5 | FF-1 | FF-3 | FF-5 | FF-7 | G-1 | | | | |
| Sample ID | E-3 3-7 | E-5 | E-7 | EE-0.5 | EE-8.5 | FF-1 | FF-3 | FF-5 | FF-7 | G-1 | | | | |
| Sample Depth (feet) | 3-7 | 0-4.3 | 0-4.5 | 0-3.5 | 0-4.5 | 0-5 | 0-4 | 0-4 | 0-3.5 | 0-5 | | | | |
| Sample Date | 5/3/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| Laboratory Sample ID | 24E0124-17 | 24E0124-07 | 24E0124-06 | 24D1044-14 | 24D1044-13 | 24D1044-12 | 24D1044-11 | 24D1044-10 | 24D1044-09 | 24E0124-11 | | | | |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 0.05 | 6 | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 2 | 6 | -- | -- |
| 1,2-Dichlorobenzene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 9 | 100 | -- | -- |
| 1,3-Dichlorobenzene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 3 | 200 | -- | -- |
| 2,4,5-Trichlorophenol | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 4 | 600 | -- | -- |
| 2,4,6-Trichlorophenol | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 20 | -- | -- |
| 2,4-Dichlorophenol | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 40 | -- | -- |
| 2,4-Dimethylphenol | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 100 | -- | -- |
| 2,4-Dinitrophenol | < 1.00 | < 1.13 | < 1.19 | < 1.17 | < 1.14 | < 1.09 | < 1.07 | < 1.08 | < 1.14 | < 1.13 | 3 | 50 | -- | -- |
| 2,4-Dinitrotoluene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 10 | -- | -- |
| 2,6-Dinitrotoluene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 2-Chloronaphthalene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 2-Chlorophenol | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 100 | -- | -- |
| 2-Methylnaphthalene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 80 | -- | -- |
| 2-Methylphenol | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 2-Nitrophenol | < 0.50 | < 0.57 | < 0.60 | < 0.58 | < 0.57 | < 0.54 | < 0.54 | < 0.54 | < 0.57 | < 0.56 | -- | -- | -- | -- |
| 3 & 4 Methylphenol | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 3,3'-Dichlorobenzidine | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 3 | 20 | -- | -- |
| 4-Bromophenyl phenyl ether | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 4-Nitrophenol | < 1.00 | < 1.13 | < 1.19 | < 1.17 | < 1.14 | < 1.09 | < 1.07 | < 1.08 | < 1.14 | < 1.13 | -- | -- | -- | -- |
| Acenaphthene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 4 | 3000 | -- | -- |
| Acenaphthylene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 2 | 10 | -- | -- |
| Acetophenone | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Aniline | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Anthracene | < 0.25 | 0.44 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 1000 | 3000 | -- | -- |
| Azobenzene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Benzo(A)anthracene | 0.33 | 1.29 | < 0.30 | < 0.29 | < 0.29 | 0.42 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 20 | 300 | -- | -- |
| Benzo(A)pyrene | 0.36 | 1.21 | < 0.30 | < 0.29 | < 0.29 | 0.42 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 2 | 30 | -- | -- |
| Benzo(B)fluoranthene | 0.37 | 0.92 | < 0.30 | < 0.29 | < 0.29 | 0.44 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 20 | 300 | -- | -- |
| Benzo(g,h,i)Perylene | < 0.25 | 0.75 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 1000 | 3000 | -- | -- |
| Benzo(K)fluoranthene | < 0.25 | 0.90 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 200 | 3000 | -- | -- |
| bis (2-chloroethoxy) Methane | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| bis (2-chloroethyl) Ether | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 0.7 | -- | -- |
| bis (2-chloroisopropyl) Ether | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 0.7 | -- | -- |
| Bis (2-ethylhexyl) phthalate | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 100 | 700 | -- | -- |
| Butylbenzylphthalate | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Chrysene | 0.32 | 1.20 | < 0.30 | < 0.29 | < 0.29 | 0.41 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 200 | 3000 | -- | -- |
| Di-n-octyl phthalate | < 0.50 | < 0.57 | < 0.60 | < 0.58 | < 0.57 | < 0.54 | < 0.54 | < 0.54 | < 0.57 | < 0.56 | -- | -- | -- | -- |
| Dibenzo(A,H)anthracene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 2 | 30 | -- | -- |
| Dibenzofuran | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Diethyl phthalate | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 10 | 200 | -- | -- |
| Dimethyl phthalate | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 50 | -- | -- |
| Fluoranthene | 0.51 | 2.28 | < 0.30 | < 0.29 | < 0.29 | 0.88 | < 0.27 | < 0.27 | < 0.29 | 0.31 | 1000 | 3000 | -- | -- |
| Fluorene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 1000 | 3000 | -- | -- |
| Hexachlorobenzene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 0.9 | -- | -- |
| Hexachlorobutadiene | < 0.25 | < 0.283 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 30 | 100 | -- | -- |
| Hexachloroethane | < 0.25 | < 0.283 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 3 | -- | -- |
| Indeno (1,2,3-cd) pyrene | < 0.25 | 0.80 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 20 | 300 | -- | -- |
| Isophorone | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| N-dibutyl phthalate | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| n-Nitrosodimethylamine | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Naphthalene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 4 | 20 | -- | -- |
| Nitrobenzene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| P-chloroaniline | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 1 | 3 | -- | -- |
| P-dichlorobenzene | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.7 | 1 | -- | -- |
| Pentachlorophenol | < 1.00 | < 1.13 | < 1.19 | < 1.17 | < 1.14 | < 1.09 | < 1.07 | < 1.08 | < 1.14 | < 1.13 | 3 | 10 | -- | -- |
| Phenanthrene | < 0.25 | 1.78 | < 0.30 | < 0.29 | < 0.29 | 0.45 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 10 | 1000 | -- | -- |
| Phenols | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | 0.9 | 20 | -- | -- |
| Pyrene | 0.60 | 2.54 | < 0.30 | < 0.29 | < 0.29 | 0.76 | < 0.27 | < 0.27 | < 0.29 | 0.29 | 1000 | 3000 | -- | -- |
| Pyridine | < 0.25 | < 0.28 | < 0.30 | < 0.29 | < 0.29 | < 0.27 | < 0.27 | < 0.27 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| **Total SVOCs** | 2.47 | 14.10 | 0 | 0 | 0 | 3.77 | 0 | 0 | 0 | 0.60 | -- | -- | 100 | 100 |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | |
| C9-C36 | 20.6 | 70.3 | 19.60 | 72.80 D | < 11.10 | 42.00 | < 11.40 | < 10.50 | 16.20 | 27.50 | -- | -- | -- | -- |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | E-3 | E-5 | E-7 | EE-0.5 | EE-8.5 | FF-1 | FF-3 | FF-5 | FF-7 | G-1 | | | | |
| Sample ID | E-3 3-7 | E-5 | E-7 | EE-0.5 | EE-8.5 | FF-1 | FF-3 | FF-5 | FF-7 | G-1 | | | | |
| Sample Depth (feet) | 3-7 | 0-4.3 | 0-4.5 | 0-3.5 | 0-4.5 | 0-5 | 0-4 | 0-4 | 0-3.5 | 0-5 | | | | |
| Sample Date | 5/3/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | | | | |
| Laboratory Sample ID | 24E0124-17 | 24E0124-07 | 24E0124-06 | 24D1044-14 | 24D1044-13 | 24D1044-12 | 24D1044-11 | 24D1044-10 | 24D1044-09 | 24E0124-11 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | |
| 2,2-Dichloropropionic acid | < 0.047 | < 0.048 | < 0.054 | < 0.049 | < 0.049 | < 0.048 | < 0.047 | < 0.049 | < 0.051 | < 0.049 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxyacetic acid | < 0.010 | < 0.010 | < 0.011 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.010 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxypropionic acid | < 0.010 | < 0.010 | < 0.011 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.010 | -- | -- | -- | -- |
| 2,4-Dichlorophenoxyacetic acid | < 0.048 | < 0.050 | < 0.056 | < 0.051 | < 0.050 | < 0.050 | < 0.049 | < 0.051 | < 0.053 | < 0.051 | -- | -- | -- | -- |
| 2-(2-Methyl-1,4-chlorophenoxy) propionic acid | < 2.410 | < 2.480 | < 2.810 | < 2.540 | < 2.520 | < 2.500 | < 2.430 | < 2.540 | < 2.660 | < 2.530 | -- | -- | -- | -- |
| 4,4'-DDD | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 10 | 40 | -- | -- |
| 4,4'-DDE | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 7 | 30 | -- | -- |
| 4,4'-DDT | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 7 | 30 | -- | -- |
| 4-(2,4-dichlorophenoxy)-Butanoic acid | < 0.049 | < 0.050 | < 0.057 | < 0.051 | < 0.051 | < 0.051 | < 0.049 | < 0.051 | < 0.054 | < 0.051 | -- | -- | -- | -- |
| Aldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.5 | -- | -- |
| beta-BHC | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-delta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-gamma | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | 0.003 | 0.5 | -- | -- |
| Chlordane (mixture of isomers) | < 0.021 | < 0.022 | < 0.023 | < 0.022 | < 0.022 | < 0.021 | < 0.022 | < 0.022 | < 0.023 | < 0.023 | -- | -- | -- | -- |
| Chlordane, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Dicamba | < 0.010 | < 0.010 | < 0.011 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.010 | -- | -- | -- | -- |
| chloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | < 0.048 | < 0.050 | < 0.056 | < 0.051 | < 0.050 | < 0.050 | < 0.049 | < 0.051 | < 0.053 | < 0.051 | -- | -- | -- | -- |
| Dieldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.025 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.6 | -- | -- |
| Dinoseb | < 0.049 | < 0.050 | < 0.057 | < 0.051 | < 0.051 | < 0.051 | < 0.049 | < 0.051 | < 0.054 | < 0.051 | -- | -- | -- | -- |
| Endosulfan sulfate | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, beta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.006 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 20 | 30 | -- | -- |
| Endrin ketone | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Heptachlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.3 | 2 | -- | -- |
| Heptachlor Epoxide | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.2 | 1 | -- | -- |
| Hexachlorobenzene | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.7 | 0.9 | -- | -- |
| Methoxychlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 300 | 400 | -- | -- |
| Methylchlorophenoxyacetic acid | < 2.380 | < 2.450 | < 2.780 | < 2.510 | < 2.490 | < 2.480 | < 2.400 | < 2.510 | < 2.630 | < 2.500 | -- | -- | -- | -- |
| Toxaphene | < 0.129 | < 0.139 | < 0.146 | < 0.138 | < 0.136 | < 0.134 | < 0.140 | < 0.136 | < 0.146 | < 0.145 | -- | -- | -- | -- |
| trans-Chlordane | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | 0.1 | < 0.05 | < 0.05 | < 0.05 | 0.08 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1254 | 0.2 | 0.09 | < 0.06 | 0.08 | 0.2 | 2.3 D | < 0.05 | < 0.05 | 0.07 | 0.2 | -- | -- | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.1 | | | | |
| PCB Aroclor 1262 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | -- | -- | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.06 | -- | -- | -- | -- |
| **Total PCBs** | 0.2 | 0.09 | 0 | 0.08 | 0.3 | 2.33 | 0 | 0 | 0.15 | 0.2 | 1 | 4 | < 2 | < 2 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | |
| Arsenic | 2.99 | 8.09 | 6.38 | 4.39 | 6.02 | 1.47 | 4.08 | 3.12 | 4.41 | 4.4 | 20 | 20 | 40 | 40 |
| Barium | 14.9 | 104 | 58 | 28.6 | 66.6 | 16.6 | 16.4 | 16.4 | 20.7 | 50 | 1000 | 3000 | -- | -- |
| Cadmium | < 0.39 | < 0.38 | < 0.44 | < 0.41 | < 0.37 | < 0.38 | < 0.42 | < 0.4 | < 0.43 | < 0.42 | 80 | 80 | 80 | 30 |
| Chromium | 5.89 | 12.5 | 11.8 | 10.7 | 12 | 5.23 | 9.93 | 7.16 | 9.44 | 12.3 | 100 | 200 | 1000 | 1000 |
| Lead | 53.5 | 368 | 171 | 37.6 | 134 | 22.1 | 13.9 | 6.21 | 61.3 | 441 | 200 | 600 | 2000 | 1000 |
| Mercury | 0.36 | 0.99 D | 0.33 | < 0.03 | 0.14 | 0.13 | < 0.04 | < 0.03 | 0.05 | 0.14 | 20 | 40 | 10 | 10 |
| Selenium | < 3.87 | < 3.84 | < 4.4 | < 4.13 | < 3.73 | < 3.78 | < 4.17 | < 3.98 | < 4.27 | < 4.16 | 400 | 800 | -- | -- |
| Silver | < 0.39 | < 0.38 | < 0.44 | < 0.41 | < 0.37 | < 0.38 | < 0.42 | < 0.4 | < 0.43 | < 0.42 | 100 | 200 | -- | -- |
| **TCLP (mg/L)** | | | | | | | | | | | | | | |
| Lead TCLP (mg/L) | -- | 1.38 | 0.4 | -- | 0.71 | -- | -- | -- | -- | 3.25 | -- | -- | -- | -- |
| **General Chemistry** | | | | | | | | | | | | | | |
| Corrosivity (pH) | 8.7 | 8.57 | 7.76 | 6.45 | 8.15 | 7.1 | 8.19 | 6.48 | 6.67 | 8.45 | -- | -- | -- | -- |
| **Physical Conditions** | | | | | | | | | | | | | | |
| Flashpoint (°F) | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | -- | -- | -- | -- |
| Reactivity - Cyanide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | -- | -- | -- | -- |
| Reactivity - Sulfide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | -- | -- | -- | -- |
| Specific Conductance @ 25°C (µmhos/cm) | 206 | 213 | 129 | 53 | 136 | 46 | 119 | 9 | 56 | 202 | -- | -- | 8000 | 4000 |

Notes:
Laboratory analytical results compared to RCS-1, RCS-2,
VOCs = Volatile Organic Carbons; SVOCs = Semi-Volat
D = identified in an analysis that has been diluted
P = pesticide target analyte had a % difference > 25% bet
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceedance of MassDEP MCP RCS-1
Exceedance of MassDEP MCP RCS-1 & RCS-2
Exceedance of COMM-97 - Lined Landfill criteria
Exceedance of COMM-97 - Unlined Landfill criteria

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | G-3 | G-3 | G-5 | G-7 | H-8.5 | HH-1 | HH-3 | HH-5 | HH-7 | I-1 | | | | |
| Sample ID | G-3 0-4 | G-3 4-8 | G-5 | G-7 | H-8.5 | HH-1 | HH-3 | HH-5 | HH-7 | I-1 | | | | |
| Sample Depth (feet) | 0-4 | 4-8 | 0-5 | 0-4.5 | 0-4.5 | 0-4 | 0-5 | 0-4 | 0-4 | 0-4 | | | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/30/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | | | | |
| Laboratory Sample ID | 24E0050-06 | 24E0050-07 | 24E0124-10 | 24E0124-09 | 24E0124-12 | 24D1044-08 | 24E0026-04 | 24D1044-06 | 24D1044-05 | 24E0124-15 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| **VOCs (mg/kg)** | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,1,1-Trichloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 30 | 600 | -- | -- |
| 1,1,2,2-Tetrachloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.005 | 0.02 | -- | -- |
| 1,1,2-Trichloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.1 | 2 | -- | -- |
| 1,1-Dichloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.4 | 9 | -- | -- |
| 1,1-Dichloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 3 | 40 | -- | -- |
| 1,1-Dichloropropene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| 1,2,3-Trichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| 1,2,3-Trichloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 2 | 6 | -- | -- |
| 1,2-Dibromo-3-chloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| 1,2-Dibromoethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 9 | 100 | -- | -- |
| 1,2-Dichloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,3,4-Trimethylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| 1,3,5-Trimethylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| 1,3-Dichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 3 | 200 | -- | -- |
| 1,3-Dichloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| 1,4-Dioxane | < 0.097 | < 0.102 | < 0.101 | < 0.110 | < 0.107 | < 0.087 | < 0.093 | < 0.086 | < 0.125 | < 0.094 | 0.2 | 5 | -- | -- |
| 2,2-Dichloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| 4-Isopropyltoluene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Acetone | < 0.049 | < 0.051 | < 0.050 | < 0.055 | < 0.054 | < 0.044 | < 0.046 | < 0.043 | < 0.063 | < 0.047 | 6 | 50 | -- | -- |
| Benzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 2 | 200 | -- | -- |
| Bromobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Bromochloromethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Bromodichloromethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.1 | 0.1 | -- | -- |
| Bromoform | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.1 | 1 | -- | -- |
| Bromomethane | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.011 | < 0.009 | < 0.009 | < 0.009 | < 0.013 | < 0.009 | 0.5 | 0.5 | -- | -- |
| Carbon Disulfide | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Carbon Tetrachloride | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 5 | 5 | -- | -- |
| Chlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 1 | 3 | -- | -- |
| Chlorodibromomethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.005 | 0.03 | -- | -- |
| Chloroethane | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.011 | < 0.009 | < 0.009 | < 0.009 | < 0.013 | < 0.009 | -- | -- | -- | -- |
| Chloroform | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.2 | 0.2 | -- | -- |
| Cis-1,2-dichloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.1 | 0.1 | -- | -- |
| cis-1,3-Dichloropropene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Dibromomethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Dichlorodifluoromethane | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.011 | < 0.009 | < 0.009 | < 0.009 | < 0.013 | < 0.009 | -- | -- | -- | -- |
| Dichloromethane | < 0.024 | < 0.026 | < 0.025 | < 0.028 | < 0.027 | < 0.022 | < 0.023 | < 0.021 | < 0.031 | < 0.024 | 0.1 | 3 | -- | -- |
| Diisopropyl Ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Ethyl benzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 40 | 1000 | -- | -- |
| Ethyl ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Ethyl tert-butyl ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Fluorotrichloromethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Hexachlorobutadiene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 30 | 100 | -- | -- |
| Hexachloroethane | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.7 | 3 | -- | -- |
| Isopropyl benzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| m,p-Xylenes | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.011 | < 0.009 | < 0.009 | < 0.009 | < 0.013 | < 0.009 | -- | -- | -- | -- |
| Methyl Chloride | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.011 | < 0.009 | < 0.009 | < 0.009 | < 0.013 | < 0.009 | -- | -- | -- | -- |
| Methyl ethyl ketone | < 0.049 | < 0.051 | < 0.050 | < 0.055 | < 0.054 | < 0.044 | < 0.046 | < 0.043 | < 0.063 | < 0.047 | 4 | 50 | -- | -- |
| Methyl isobutyl ketone | < 0.049 | < 0.051 | < 0.050 | < 0.055 | < 0.054 | < 0.044 | < 0.046 | < 0.043 | < 0.063 | < 0.047 | 0.4 | 50 | -- | -- |
| Methyl n-butyl ketone | < 0.049 | < 0.051 | < 0.050 | < 0.055 | < 0.054 | < 0.044 | < 0.046 | < 0.043 | < 0.063 | < 0.047 | -- | -- | -- | -- |
| Methyl-tert-butyl ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.1 | 100 | -- | -- |
| n-Butylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| n-Propylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Naphthalene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | 0.013 | < 0.004 | < 0.006 | < 0.005 | 4 | 20 | -- | -- |
| O-chlorotoluene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| o-Xylenes | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| p-Chlorotoluene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| P-dichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.7 | 1 | -- | -- |
| sec-Butylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Styrene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 3 | 4 | -- | -- |
| Tert-amyl-methyl ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| tert-Butylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Tetrachloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 1 | 4 | -- | -- |
| Tetrahydrofuran | < 0.019 | < 0.020 | < 0.020 | < 0.022 | < 0.021 | < 0.018 | < 0.019 | < 0.017 | < 0.025 | < 0.019 | -- | -- | -- | -- |
| Toluene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 30 | 1000 | -- | -- |
| Trans-1,2-dichloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 1 | 1 | -- | -- |
| trans-1,3-Dichloropropene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | -- | -- | -- | -- |
| Trichloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.004 | < 0.005 | < 0.004 | < 0.006 | < 0.005 | 0.3 | 0.3 | -- | -- |
| Vinyl Chloride | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.011 | < 0.009 | < 0.009 | < 0.009 | < 0.013 | < 0.009 | 0.3 | 0.7 | -- | -- |
| Xylene | < 0.010 | < 0.010 | < 0.010 | < 0.011 | < 0.011 | < 0.009 | < 0.009 | < 0.009 | < 0.013 | < 0.009 | 100 | 100 | -- | -- |
| Total VOCs | 0 | 0 | 0 | 0 | 0 | 0 | 0.013 | 0 | 0 | 0 | -- | -- | 10 | 4 |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | G-3 | G-3 | G-5 | G-7 | H-8.5 | HH-1 | HH-3 | HH-5 | HH-7 | I-1 | | | | |
| Sample ID | G-3 0-4 | G-3 4-8 | G-5 | G-7 | H-8.5 | HH-1 | HH-3 | HH-5 | HH-7 | I-1 | | | | |
| Sample Depth (feet) | 0-4 | 4-8 | 0-5 | 0-4.5 | 0-4.5 | 0-4 | 0-5 | 0-4 | 0-4 | 0-4 | | | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/30/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | | | | |
| Laboratory Sample ID | 24E0050-06 | 24E0050-07 | 24E0124-10 | 24E0124-09 | 24E0124-12 | 24D1044-08 | 24E0026-04 | 24D1044-06 | 24D1044-05 | 24E0124-15 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | 0.04 | < 0.03 | < 0.03 | < 0.03 | 0.05 | 6 | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 2 | 6 | -- | -- |
| 1,2-Dichlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 9 | 100 | -- | -- |
| 1,3-Dichlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 3 | 200 | -- | -- |
| 2,4,5-Trichlorophenol | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 4 | 600 | -- | -- |
| 2,4,6-Trichlorophenol | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 20 | -- | -- |
| 2,4-Dichlorophenol | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 40 | -- | -- |
| 2,4-Dimethylphenol | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 100 | -- | -- |
| 2,4-Dinitrophenol | < 1.09 | < 1.12 | < 1.08 | < 1.11 | < 1.03 | < 1.11 | < 1.09 | < 1.11 | < 1.14 | < 1.11 | 3 | 50 | -- | -- |
| 2,4-Dinitrotoluene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 10 | -- | -- |
| 2,6-Dinitrotoluene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 2-Chloronaphthalene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 2-Chlorophenol | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 100 | -- | -- |
| 2-Methylnaphthalene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 80 | -- | -- |
| 2-Methylphenol | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 2-Nitrophenol | < 0.55 | < 0.56 | < 0.54 | < 0.55 | < 0.51 | < 0.56 | < 0.55 | < 0.55 | < 0.57 | < 0.56 | -- | -- | -- | -- |
| 3 & 4 Methylphenol | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 3,3'-Dichlorobenzidine | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 3 | 20 | -- | -- |
| 4-Bromophenyl phenyl ether | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| 4-Nitrophenol | < 1.09 | < 1.12 | < 1.08 | < 1.11 | < 1.03 | < 1.11 | < 1.09 | < 1.11 | < 1.14 | < 1.11 | -- | -- | -- | -- |
| Acenaphthene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 4 | 3000 | -- | -- |
| Acenaphthylene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 2 | 10 | -- | -- |
| Acetophenone | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Aniline | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Anthracene | < 0.27 | 0.40 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | 0.47 | < 0.28 | < 0.29 | < 0.28 | 1000 | 3000 | -- | -- |
| Azobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Benzo(A)anthracene | < 0.27 | 0.78 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | 0.48 | < 0.28 | < 0.29 | 0.38 | 20 | 300 | -- | -- |
| Benzo(A)pyrene | < 0.27 | 0.80 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | 0.40 | < 0.28 | < 0.29 | 0.40 | 2 | 30 | -- | -- |
| Benzo(B)fluoranthene | < 0.27 | 0.55 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | 0.41 | < 0.28 | < 0.29 | 0.46 | 20 | 300 | -- | -- |
| Benzo(g,h,i)Perylene | < 0.27 | 0.52 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 1000 | 3000 | -- | -- |
| Benzo(K)fluoranthene | < 0.27 | 0.47 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 200 | 3000 | -- | -- |
| bis (2-chloroethoxy) Methane | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| bis (2-chloroethyl) Ether | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 0.7 | -- | -- |
| bis (2-chloroisopropyl) Ether | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 0.7 | -- | -- |
| Bis (2-ethylhexyl) phthalate | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | 0.53 | < 0.28 | 100 | 700 | -- | -- |
| Butylbenzylphthalate | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | 1.32 | < 0.28 | -- | -- | -- | -- |
| Chrysene | < 0.27 | 0.77 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | 0.42 | < 0.28 | < 0.29 | 0.43 | 200 | 3000 | -- | -- |
| Di-n-octyl phthalate | < 0.55 | < 0.56 | < 0.54 | < 0.55 | < 0.51 | < 0.56 | < 0.55 | < 0.55 | 1.03 | < 0.56 | -- | -- | -- | -- |
| Dibenzo(A,H)anthracene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 2 | 30 | -- | -- |
| Dibenzofuran | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Diethyl phthalate | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 10 | 200 | -- | -- |
| Dimethyl phthalate | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 50 | -- | -- |
| Fluoranthene | 0.58 | 1.39 | 0.35 | 0.28 | < 0.26 | 0.39 | 1.28 | < 0.28 | < 0.29 | 0.73 | 1000 | 3000 | -- | -- |
| Fluorene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 1000 | 3000 | -- | -- |
| Hexachlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 0.9 | -- | -- |
| Hexachlorobutadiene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 30 | 100 | -- | -- |
| Hexachloroethane | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 3 | -- | -- |
| Indeno (1,2,3-cd) pyrene | < 0.27 | 0.48 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 20 | 300 | -- | -- |
| Isophorone | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| N-dibutyl phthalate | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| n-Nitrosodimethylamine | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| Naphthalene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | 0.35 | < 0.28 | < 0.29 | < 0.28 | 4 | 20 | -- | -- |
| Nitrobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| P-chloroaniline | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 1 | 3 | -- | -- |
| P-dichlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.7 | 1 | -- | -- |
| Pentachlorophenol | < 1.09 | < 1.12 | < 1.08 | < 1.11 | < 1.03 | < 1.11 | < 1.09 | < 1.11 | < 1.14 | < 1.11 | 3 | 10 | -- | -- |
| Phenanthrene | 0.56 | 1.51 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | 1.56 | < 0.28 | < 0.29 | 0.38 | 10 | 1000 | -- | -- |
| Phenols | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | 0.9 | 20 | -- | -- |
| Pyrene | 0.56 | 1.67 | 0.44 | 0.37 | < 0.26 | 0.33 | 0.97 | < 0.28 | < 0.29 | 0.69 | 1000 | 3000 | -- | -- |
| Pyridine | < 0.27 | < 0.28 | < 0.27 | < 0.28 | < 0.26 | < 0.28 | < 0.27 | < 0.28 | < 0.29 | < 0.28 | -- | -- | -- | -- |
| **Total SVOCs** | 1.70 | 9.38 | 0.78 | 0.64 | 0 | 0.71 | 6.37 | 0 | 2.88 | 3.48 | -- | -- | 100 | 100 |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | | |
| C9-C36 | 19.60 | 44.70 | 20.70 | 63.40 | 17.90 | 298 | < 11.20 | < 10.60 | 15.50 | 28.10 | -- | -- | -- | -- |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | G-3 | G-3 | G-5 | G-7 | H-8.5 | HH-1 | HH-3 | HH-5 | HH-7 | I-1 | | | | |
| Sample ID | G-3 0-4 | G-3 4-8 | G-5 | G-7 | H-8.5 | HH-1 | HH-3 | HH-5 | HH-7 | I-1 | | | | |
| Sample Depth (feet) | 0-4 | 4-8 | 0-5 | 0-4.5 | 0-4.5 | 0-4 | 0-5 | 0-4 | 0-4 | 0-4 | | | | |
| Sample Date | 5/1/2024 | 5/1/2024 | 5/2/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/30/2024 | 4/29/2024 | 4/29/2024 | 5/2/2024 | | | | |
| Laboratory Sample ID | 24E0050-06 | 24E0050-07 | 24E0124-10 | 24E0124-09 | 24E0124-12 | 24D1044-08 | 24E0026-04 | 24D1044-06 | 24D1044-05 | 24E0124-15 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | | |
| 2,2-Dichloropropionic acid | < 0.047 | < 0.051 | < 0.049 | < 0.049 | < 0.047 | < 0.048 | < 0.048 | < 0.049 | < 0.049 | < 0.048 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxyacetic acid | < 0.010 | < 0.011 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxypropionic acid | < 0.010 | < 0.011 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| 2,4-Dichlorophenoxyacetic acid | < 0.049 | < 0.053 | < 0.051 | < 0.051 | < 0.049 | < 0.049 | < 0.049 | < 0.051 | < 0.051 | < 0.050 | -- | -- | -- | -- |
| 2-(2-Methyl-1,4-chlorophenoxy) propionic acid | < 2.430 | 2.640 | < 2.530 | < 2.540 | < 2.450 | < 2.460 | < 2.470 | < 2.540 | < 2.530 | < 2.490 | -- | -- | -- | -- |
| 4,4'-DDD | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 10 | 40 | -- | -- |
| 4,4'-DDE | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 7 | 30 | -- | -- |
| 4,4'-DDT | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.008 | 7 | 30 | -- | -- |
| 4-(2,4-dichlorophenoxy)-Butanoic acid | < 0.049 | < 0.053 | < 0.051 | < 0.051 | < 0.049 | < 0.050 | < 0.050 | < 0.051 | < 0.051 | < 0.050 | -- | -- | -- | -- |
| Aldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.5 | -- | -- |
| beta-BHC | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-delta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-gamma | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | 0.003 | 0.5 | -- | -- |
| Chlordane (mixture of isomers) | < 0.022 | < 0.023 | < 0.021 | < 0.023 | < 0.022 | < 0.022 | < 0.023 | < 0.022 | < 0.022 | < 0.023 | -- | -- | -- | -- |
| Chlordane, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Dicamba | < 0.010 | < 0.011 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| chloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | < 0.049 | < 0.053 | < 0.051 | < 0.051 | < 0.049 | < 0.049 | < 0.049 | < 0.051 | < 0.051 | < 0.050 | -- | -- | -- | -- |
| Dieldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.09 | 0.6 | -- | -- |
| Dinoseb | < 0.049 | < 0.053 | < 0.051 | < 0.051 | < 0.049 | < 0.050 | < 0.050 | < 0.051 | < 0.051 | < 0.050 | -- | -- | -- | -- |
| Endosulfan sulfate | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, beta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.004 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 20 | 30 | -- | -- |
| Endrin ketone | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Heptachlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.3 | 2 | -- | -- |
| Heptachlor Epoxide | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.2 | 1 | -- | -- |
| Hexachlorobenzene | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.7 | 0.9 | -- | -- |
| Methoxychlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 300 | 400 | -- | -- |
| Methylchlorophenoxyacetic acid | < 2.410 | < 2.610 | < 2.500 | < 2.510 | < 2.420 | < 2.440 | < 2.450 | < 2.510 | < 2.510 | < 2.460 | -- | -- | -- | -- |
| Toxaphene | < 0.140 | < 0.146 | < 0.133 | < 0.143 | < 0.137 | < 0.137 | < 0.141 | < 0.139 | < 0.134 | < 0.146 | -- | -- | -- | -- |
| trans-Chlordane | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| **PCBs (mg/kg)** | | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1248 | < 0.05 | 0.1 | < 0.05 | 0.2 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | 0.07 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1254 | < 0.05 | 0.1 | 0.1 | 0.2 | 0.1 | 0.5 | 0.2 | < 0.06 | 0.09 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | | | | |
| PCB Aroclor 1262 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | < 0.05 | < 0.06 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| **Total PCBs** | 0 | 0.2 | 0.1 | 0.4 | 0.1 | 0.5 | 0.2 | 0 | 0.16 | 0 | 1 | 4 | < 2 | < 2 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | | |
| Arsenic | 4.93 | 4.95 | 3.38 | < 0.86 | 2.79 | 4.83 | 2.67 | 1.8 | 3.24 | 6.3 | 20 | 20 | 40 | 40 |
| Barium | 21.5 | 24.9 | 18.1 | < 0.86 | 21.6 | 21.9 | 12.9 | 8.93 | 19.4 | 44.7 | 1000 | 3000 | -- | -- |
| Cadmium | < 0.37 | < 0.42 | < 0.36 | < 0.43 | < 0.4 | < 0.38 | < 0.4 | < 0.41 | < 0.42 | < 0.41 | 80 | 80 | 80 | 30 |
| Chromium | 10.2 | 13 | 6.3 | < 0.86 | 10.1 | 7.16 | 4.97 | 3.9 | 5.41 | 15.4 | 100 | 200 | 1000 | 1000 |
| Lead | 24.2 | 59.7 | 51.1 | < 4.3 | 17.6 | 86.2 | 18.8 | < 4.12 | 53.6 | 107 | 200 | 600 | 2000 | 1000 |
| Mercury | < 0.03 | 0.05 | 0.18 | 0.13 | 0.07 | 0.05 | < 0.03 | < 0.03 | 0.13 | 0.26 | 20 | 40 | 10 | 10 |
| Selenium | < 3.75 | < 4.16 | < 3.65 | < 4.3 | < 4 | < 3.84 | < 4.05 | < 4.12 | < 4.23 | < 4.12 | 400 | 800 | -- | -- |
| Silver | < 0.37 | < 0.42 | < 0.36 | < 0.43 | < 0.4 | < 0.38 | < 0.4 | < 0.41 | < 0.42 | < 0.41 | 100 | 200 | -- | -- |
| **TCLP (mg/L)** | | | | | | | | | | | | | | |
| Lead TCLP (mg/L) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.29 | -- | -- | -- | -- |
| **General Chemistry** | | | | | | | | | | | | | | |
| Corrosivity (pH) | 8.8 | 8.44 | 8.38 | 7.52 | 8.22 | 5.8 | 7.12 | 6.42 | 7 | 6.92 | -- | -- | -- | -- |
| **Physical Conditions** | | | | | | | | | | | | | | |
| Flashpoint ($^{o}$F) | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | -- | -- | -- | -- |
| Reactivity - Cyanide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | -- | -- | -- | -- |
| Reactivity - Sulfide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | -- | -- | -- | -- |
| Specific Conductance @ 25$^{o}$C (µmhos/cm) | 92 | 156 | 269 | 730 | 306 | 50 | 7 | 9 | 68 | 39 | -- | -- | 8000 | 4000 |

Notes:
Laboratory analytical results compared to RCS-1, RCS-2,
VOCs = Volatile Organic Carbons; SVOCs = Semi-Volat
D = identified in an analysis that has been diluted
P = pesticide target analyte had a % difference > 25% bet
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceedance of MassDEP MCP RCS-1
Exceedance of MassDEP MCP RCS-1 & RCS-2
Exceedance of COMM-97 - Lined Landfill criteria
Exceedance of COMM-97 - Unlined Landfill criteria

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | I-3 | I-3 | I-5 | I-7 | II-0.5 | II-8.5 | II-8.5 | JJ II-2 | JJ II-6 | | | | |
| Sample ID | I-3 | I-3 4-8 | I-5 | I-7 | II-0.5 | II-8.5 | II-8.5 5-6 | JJ II-2 | JJ II-6 | | | | |
| Sample Depth (feet) | 0-5 | 4-8 | 0-4.3 | 0-4.3 | 5-6 | 0-5 | 5-6 | 0-3.5 | 0-4.5 | | | | |
| Sample Date | 5/1/2024 | 6/21/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/29/2024 | 5/3/2024 | 4/29/224 | 4/29/2024 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| Laboratory Sample ID | 24E0050-04 | 24F0927-02 | 24E0124-14 | 24E0124-13 | 24D1044-04 | 24D1044-03 | 24E0124-18 | 24D1044-02 | 24D1044-01 | | | | |
| **VOCs (mg/kg)** | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,1,1-Trichloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 30 | 600 | -- | -- |
| 1,1,2,2-Tetrachloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.005 | 0.02 | -- | -- |
| 1,1,2-Trichloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.1 | 2 | -- | -- |
| 1,1-Dichloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.4 | 9 | -- | -- |
| 1,1-Dichloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 3 | 40 | -- | -- |
| 1,1-Dichloropropene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,2,3-Trichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,2,3-Trichloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 2 | 6 | -- | -- |
| 1,2-Dibromo-3-chloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,2-Dibromoethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 9 | 100 | -- | -- |
| 1,2-Dichloroethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,2-Dichloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| 1,3,4-Trimethylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,3,5-Trimethylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,3-Dichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 3 | 200 | -- | -- |
| 1,3-Dichloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 1,4-Dioxane | < 0.093 | < 0.098 | < 0.095 | < 0.110 | < 0.093 | < 0.112 | < 0.296 | < 0.093 | < 0.095 | 0.2 | 5 | -- | -- |
| 2,2-Dichloropropane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| 4-Isopropyltoluene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Acetone | < 0.046 | < 0.049 | < 0.048 | 0.091 | < 0.047 | 0.071 | 0.246 | < 0.047 | < 0.048 | 6 | 50 | -- | -- |
| Benzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 2 | 200 | -- | -- |
| Bromobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Bromochloromethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Bromodichloromethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| Bromoform | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.1 | 1 | -- | -- |
| Bromomethane | < 0.009 | < 0.010 | < 0.010 | < 0.011 | < 0.009 | < 0.011 | < 0.030 | < 0.009 | < 0.010 | 0.5 | 0.5 | -- | -- |
| Carbon Disulfide | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Carbon Tetrachloride | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 5 | 5 | -- | -- |
| Chlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 1 | 3 | -- | -- |
| Chlorodibromomethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.005 | 0.03 | -- | -- |
| Chloroethane | < 0.009 | < 0.010 | < 0.010 | < 0.011 | < 0.009 | < 0.011 | < 0.030 | < 0.009 | < 0.010 | -- | -- | -- | -- |
| Chloroform | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.2 | 0.2 | -- | -- |
| Cis-1,2-dichloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.1 | 0.1 | -- | -- |
| cis-1,3-Dichloropropene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Dibromomethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Dichlorodifluoromethane | < 0.009 | < 0.010 | < 0.010 | < 0.011 | < 0.009 | < 0.011 | < 0.030 | < 0.009 | < 0.010 | -- | -- | -- | -- |
| Dichloromethane | < 0.023 | < 0.024 | < 0.024 | < 0.028 | < 0.023 | < 0.028 | < 0.074 | < 0.023 | < 0.024 | 0.1 | 3 | -- | -- |
| Diisopropyl Ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Ethyl benzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 40 | 1000 | -- | -- |
| Ethyl ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Ethyl tert-butyl ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Fluorotrichloromethane | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Hexachlorobutadiene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 30 | 100 | -- | -- |
| Hexachloroethane | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.7 | 3 | -- | -- |
| Isopropyl benzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| m,p-Xylenes | < 0.009 | < 0.010 | < 0.010 | < 0.011 | < 0.009 | < 0.011 | < 0.030 | < 0.009 | < 0.010 | -- | -- | -- | -- |
| Methyl Chloride | < 0.009 | < 0.010 | < 0.010 | < 0.011 | < 0.009 | < 0.011 | < 0.030 | < 0.009 | < 0.010 | -- | -- | -- | -- |
| Methyl ethyl ketone | < 0.046 | < 0.049 | < 0.048 | < 0.055 | < 0.047 | < 0.056 | < 0.148 | < 0.047 | < 0.048 | 4 | 50 | -- | -- |
| Methyl isobutyl ketone | < 0.046 | < 0.049 | < 0.048 | < 0.055 | < 0.047 | < 0.056 | < 0.148 | < 0.047 | < 0.048 | 0.4 | 50 | -- | -- |
| Methyl n-butyl ketone | < 0.046 | < 0.049 | < 0.048 | < 0.055 | < 0.047 | < 0.056 | < 0.148 | < 0.047 | < 0.048 | -- | -- | -- | -- |
| Methyl-tert-butyl ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.1 | 100 | -- | -- |
| n-Butylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| n-Propylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Naphthalene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 4 | 20 | -- | -- |
| O-chlorotoluene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| o-Xylenes | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| p-Chlorotoluene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| P-dichlorobenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.7 | 1 | -- | -- |
| sec-Butylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Styrene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 3 | 4 | -- | -- |
| Tert-amyl-methyl ether | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| tert-Butylbenzene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Tetrachloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 1 | 4 | -- | -- |
| Tetrahydrofuran | < 0.019 | < 0.020 | < 0.019 | < 0.022 | < 0.019 | < 0.022 | < 0.059 | < 0.019 | < 0.019 | -- | -- | -- | -- |
| Toluene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 30 | 1000 | -- | -- |
| Trans-1,2-dichloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 1 | 1 | -- | -- |
| trans-1,3-Dichloropropene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | -- | -- | -- | -- |
| Trichloroethylene | < 0.005 | < 0.005 | < 0.005 | < 0.006 | < 0.005 | < 0.006 | < 0.015 | < 0.005 | < 0.005 | 0.3 | 0.3 | -- | -- |
| Vinyl Chloride | < 0.009 | < 0.010 | < 0.010 | < 0.011 | < 0.009 | < 0.011 | < 0.030 | < 0.009 | < 0.010 | 0.3 | 0.7 | -- | -- |
| Xylene | < 0.009 | < 0.010 | < 0.010 | < 0.011 | < 0.009 | < 0.011 | < 0.030 | < 0.009 | < 0.010 | 100 | 100 | -- | -- |
| Total VOCs | 0 | 0 | 0 | 0.091 | 0 | 0.071 | 0.246 | 0 | 0 | -- | -- | 10 | 4 |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | I-3 | I-3 | I-5 | I-7 | II-0.5 | II-8.5 | II-8.5 | JJ II-2 | JJ II-6 | | | | |
| Sample ID | I-3 | I-3 4-8 | I-5 | I-7 | II-0.5 | II-8.5 | II-8.5 5-6 | JJ II-2 | JJ II-6 | | | | |
| Sample Depth (feet) | 0-5 | 4-8 | 0-4.3 | 0-4.3 | 5-6 | 0-5 | 5-6 | 0-3.5 | 0-4.5 | | | | |
| Sample Date | 5/1/2024 | 6/21/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/29/2024 | 5/3/2024 | 4/29/224 | 4/29/2024 | | | | |
| Laboratory Sample ID | 24E0050-04 | 24F0927-02 | 24E0124-14 | 24E0124-13 | 24D1044-04 | 24D1044-03 | 24E0124-18 | 24D1044-02 | 24D1044-01 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | |
| 1,1-Biphenyl | < 0.03 | < 0.03 | 0.04 | < 0.03 | < 0.03 | < 0.03 | < 0.10 | < 0.03 | < 0.03 | 0.05 | 6 | -- | -- |
| 1,2,4-Trichlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.98 | < 0.27 | < 0.28 | 2 | 6 | -- | -- |
| 1,2-Dichlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.98 | < 0.27 | < 0.28 | 9 | 100 | -- | -- |
| 1,3-Dichlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.98 | < 0.27 | < 0.28 | 3 | 200 | -- | -- |
| 2,4,5-Trichlorophenol | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.98 | < 0.27 | < 0.28 | 4 | 600 | -- | -- |
| 2,4,6-Trichlorophenol | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.98 | < 0.27 | < 0.28 | 0.7 | 20 | -- | -- |
| 2,4-Dichlorophenol | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.98 | < 0.27 | < 0.28 | 0.7 | 40 | -- | -- |
| 2,4-Dimethylphenol | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.98 | < 0.27 | < 0.28 | 0.7 | 100 | -- | -- |
| 2,4-Dinitrophenol | < 1.08 | < 1.11 | < 1.07 | < 1.10 | < 1.06 | < 1.23 | < 3.95 | < 1.08 | < 1.12 | 3 | 50 | -- | -- |
| 2,4-Dinitrotoluene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.7 | 10 | -- | -- |
| 2,6-Dinitrotoluene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| 2-Chloronaphthalene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| 2-Chlorophenol | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.7 | 100 | -- | -- |
| 2-Methylnaphthalene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.7 | 80 | -- | -- |
| 2-Methylphenol | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| 2-Nitrophenol | < 0.54 | < 0.55 | < 0.54 | < 0.55 | < 0.53 | < 0.61 | < 1.98 | < 0.54 | < 0.56 | -- | -- | -- | -- |
| 3 & 4 Methylphenol | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| 3,3'-Dichlorobenzidine | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 3 | 20 | -- | -- |
| 4-Bromophenyl phenyl ether | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| 4-Nitrophenol | < 1.08 | < 1.11 | < 1.07 | < 1.10 | < 1.06 | < 1.23 | < 3.95 | < 1.08 | < 1.12 | -- | -- | -- | -- |
| Acenaphthene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 4 | 3000 | -- | -- |
| Acenaphthylene | < 0.27 | < 0.28 | 1.05 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 2 | 10 | -- | -- |
| Acetophenone | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| Aniline | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| Anthracene | < 0.27 | < 0.28 | 0.82 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 1000 | 3000 | -- | -- |
| Azobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| Benzo(A)anthracene | < 0.27 | < 0.28 | 3.22 | < 0.27 | 0.65 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 20 | 300 | -- | -- |
| Benzo(A)pyrene | < 0.27 | < 0.28 | 2.23 | < 0.27 | 0.62 | < 0.31 | < 0.99 | < 0.271 | < 0.28 | 2 | 30 | -- | -- |
| Benzo(B)fluoranthene | < 0.27 | < 0.28 | 2.20 | < 0.27 | 0.67 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 20 | 300 | -- | -- |
| Benzo(g,h,i)Perylene | < 0.27 | < 0.28 | 1.19 | < 0.27 | 0.38 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 1000 | 3000 | -- | -- |
| Benzo(K)fluoranthene | < 0.27 | < 0.28 | 0.71 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 200 | 3000 | -- | -- |
| bis (2-chloroethoxy) Methane | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| bis (2-chloroethyl) Ether | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.7 | 0.7 | -- | -- |
| bis (2-chloroisopropyl) Ether | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.7 | 0.7 | -- | -- |
| Bis (2-ethylhexyl) phthalate | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 100 | 700 | -- | -- |
| Butylbenzylphthalate | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| Chrysene | < 0.27 | < 0.28 | 4.09 | < 0.27 | 0.66 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 200 | 3000 | -- | -- |
| Di-n-octyl phthalate | < 0.54 | < 0.55 | < 0.54 | < 0.55 | < 0.53 | < 0.61 | < 1.98 | < 0.54 | < 0.561 | -- | -- | -- | -- |
| Dibenzo(A,H)anthracene | < 0.27 | < 0.28 | 0.38 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 2 | 30 | -- | -- |
| Dibenzofuran | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| Diethyl phthalate | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 10 | 200 | -- | -- |
| Dimethyl phthalate | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.7 | 50 | -- | -- |
| Fluoranthene | 0.41 | 0.33 | 3.58 | < 0.27 | 1.44 | 0.42 | < 0.99 | < 0.27 | < 0.28 | 1000 | 3000 | -- | -- |
| Fluorene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 1000 | 3000 | -- | -- |
| Hexachlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.7 | 0.9 | -- | -- |
| Hexachlorobutadiene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 30 | 100 | -- | -- |
| Hexachloroethane | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.7 | 3 | -- | -- |
| Indeno (1,2,3-cd) pyrene | < 0.27 | < 0.28 | 1.00 | < 0.27 | 0.37 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 20 | 300 | -- | -- |
| Isophorone | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| N-dibutyl phthalate | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| n-Nitrosodimethylamine | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| Naphthalene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 4 | 20 | -- | -- |
| Nitrobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| P-chloroaniline | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 1 | 3 | -- | -- |
| P-dichlorobenzene | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.7 | 1 | -- | -- |
| Pentachlorophenol | < 1.08 | < 1.11 | < 1.07 | < 1.10 | < 1.06 | < 1.23 | < 3.95 | < 1.08 | < 1.12 | 3 | 10 | -- | -- |
| Phenanthrene | < 0.27 | < 0.28 | 2.48 | < 0.27 | 0.98 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 10 | 1000 | -- | -- |
| Phenols | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | 0.9 | 20 | -- | -- |
| Pyrene | 0.44 | 0.41 | 5.88 | < 0.27 | 1.24 | 0.40 | < 0.99 | < 0.27 | < 0.28 | 1000 | 3000 | -- | -- |
| Pyridine | < 0.27 | < 0.28 | < 0.27 | < 0.27 | < 0.26 | < 0.31 | < 0.99 | < 0.27 | < 0.28 | -- | -- | -- | -- |
| **Total SVOCs** | 0.86 | 0.74 | 28.87 | 0.00 | 7.00 | 0.83 | 0 | 0 | 0 | -- | -- | 100 | 100 |
| **Petroleum Hydrocarbons (mg/kg)** | | | | | | | | | | | | | |
| C9-C36 | 73.80 | 73.20 | 16.00 | < 11.90 | 32.00 | 36.20 | 273.00 | < 10.60 | < 11 | -- | -- | -- | -- |

Table 5
Site 1 - Soil Waste Characterization
New Bedford Marine Commerce Terminal
New Bedford, MA

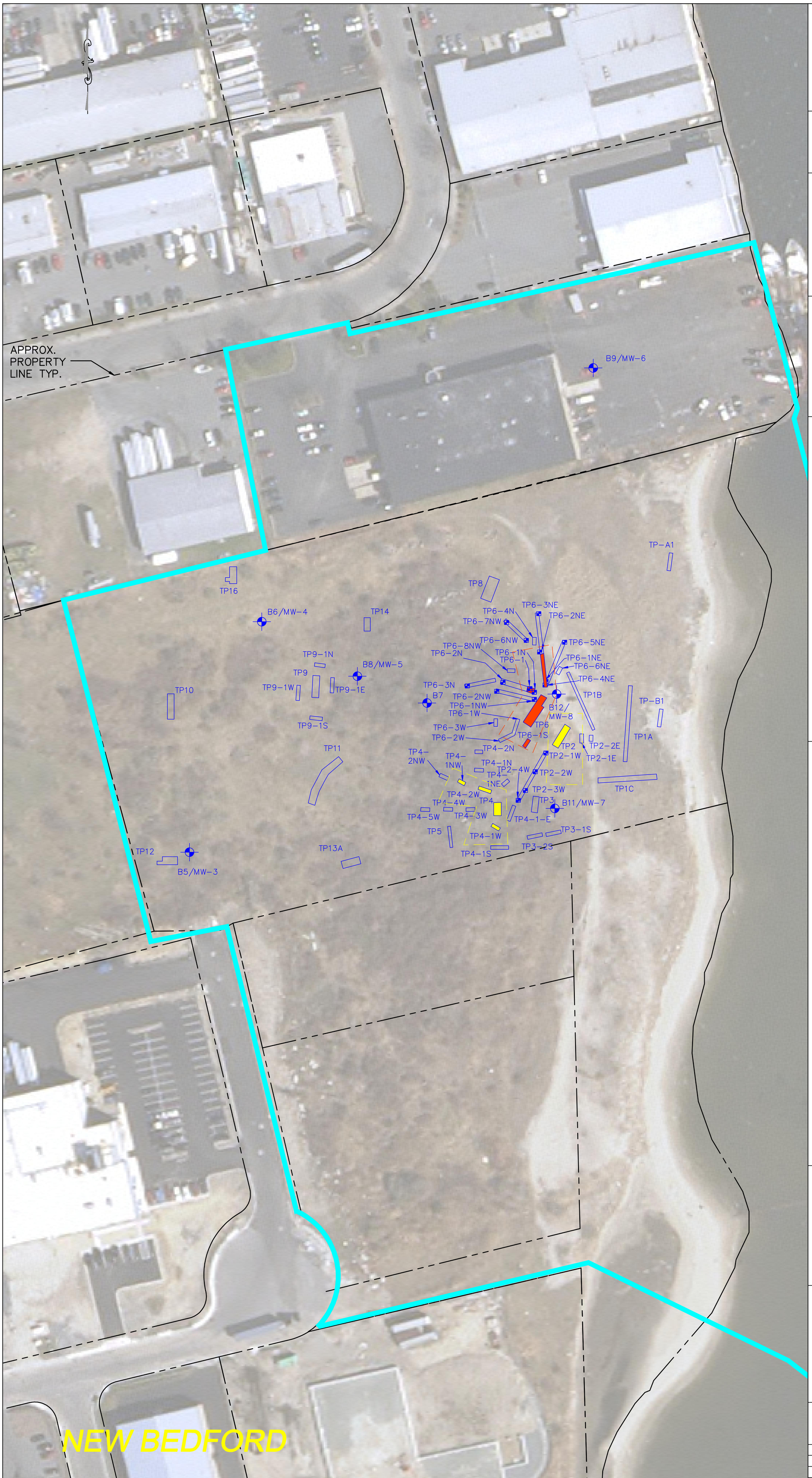
| Site 1 - New Bedford Marine Commerce Termin | | | | | | | | | | MCP Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | I-3 | I-3 | I-5 | I-7 | II-0.5 | II-8.5 | II-8.5 | JJ II-2 | JJ II-6 | | | | |
| Sample ID | I-3 | I-3 4-8 | I-5 | I-7 | II-0.5 | II-8.5 | II-8.5 5-6 | JJ II-2 | JJ II-6 | | | | |
| Sample Depth (feet) | 0-5 | 4-8 | 0-4.3 | 0-4.3 | 5-6 | 0-5 | 5-6 | 0-3.5 | 0-4.5 | | | | |
| Sample Date | 5/1/2024 | 6/21/2024 | 5/2/2024 | 5/2/2024 | 4/29/2024 | 4/29/2024 | 5/3/2024 | 4/29/224 | 4/29/2024 | RCS-1 | RCS-2 | Landfills Lined | Landfills Unlined |
| Laboratory Sample ID | 24E0050-04 | 24F0927-02 | 24E0124-14 | 24E0124-13 | 24D1044-04 | 24D1044-03 | 24E0124-18 | 24D1044-02 | 24D1044-01 | | | | |
| **Pesticides/Herbicides (mg/kg)** | | | | | | | | | | | | | |
| 2,2-Dichloropropionic acid | < 0.049 | < 0.051 | < 0.048 | < 0.051 | < 0.046 | < 0.055 | < 0.088 | < 0.049 | < 0.048 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxyacetic acid | < 0.010 | < 0.011 | < 0.010 | < 0.011 | < 0.010 | < 0.011 | < 0.018 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenoxypropionic acid | < 0.010 | < 0.011 | < 0.010 | < 0.011 | < 0.010 | < 0.011 | < 0.018 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| 2,4-Dichlorophenoxyacetic acid | < 0.050 | < 0.053 | < 0.050 | < 0.052 | < 0.047 | 0.107 | < 0.091 | < 0.050 | < 0.049 | -- | -- | -- | -- |
| 2-(2-Methyl-1,4-chlorophenoxy) propionic acid | < 2.520 | < 2.640 | < 2.480 | < 2.610 | < 2.370 | < 2.830 | < 4.550 | < 2.520 | < 2.460 | -- | -- | -- | -- |
| 4,4'-DDD | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 10 | 40 | -- | -- |
| 4,4'-DDE | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 7 | 30 | -- | -- |
| 4,4'-DDT | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 7 | 30 | -- | -- |
| 4-(2,4-dichlorophenoxy)-Butanoic acid | < 0.051 | < 0.053 | < 0.050 | < 0.053 | < 0.048 | < 0.057 | < 0.092 | < 0.051 | < 0.050 | -- | -- | -- | -- |
| Aldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 0.09 | 0.5 | -- | -- |
| beta-BHC | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-delta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| BHC-gamma | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.003 | < 0.002 | < 0.002 | 0.003 | 0.5 | -- | -- |
| Chlordane (mixture of isomers) | < 0.021 | < 0.022 | < 0.023 | < 0.023 | < 0.021 | < 0.025 | < 0.041 | < 0.022 | < 0.022 | -- | -- | -- | -- |
| Chlordane, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Dicamba | < 0.010 | < 0.011 | < 0.010 | < 0.010 | < 0.009 | < 0.011 | < 0.018 | < 0.010 | < 0.010 | -- | -- | -- | -- |
| hloroprop (2-(2,4-dichlorophenoxy) propanoic acid) | < 0.050 | < 0.053 | < 0.050 | < 0.052 | < 0.047 | < 0.057 | < 0.091 | < 0.050 | < 0.049 | -- | -- | -- | -- |
| Dieldrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.037 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 0.09 | 0.6 | -- | -- |
| Dinoseb | < 0.051 | < 0.053 | < 0.050 | < 0.053 | < 0.048 | < 0.057 | < 0.092 | < 0.051 | < 0.050 | -- | -- | -- | -- |
| Endosulfan sulfate | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, alpha | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endosulfan, beta | < 0.003 | < 0.003 | < 0.003 | < 0.003 | 0.009 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Endrin | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 20 | 30 | -- | -- |
| Endrin ketone | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| Heptachlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 0.3 | 2 | -- | -- |
| Heptachlor Epoxide | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 0.2 | 1 | -- | -- |
| Hexachlorobenzene | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 0.7 | 0.9 | -- | -- |
| Methoxychlor | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | 300 | 400 | -- | -- |
| Methylchlorophenoxyacetic acid | < 2.500 | < 2.610 | < 2.450 | < 2.580 | < 2.350 | < 2.800 | < 4.500 | < 2.490 | < 2.430 | -- | -- | -- | -- |
| Toxaphene | < 0.132 | < 0.139 | < 0.143 | < 0.146 | < 0.131 | < 0.153 | < 0.257 | < 0.136 | < 0.135 | -- | -- | -- | -- |
| trans-Chlordane | < 0.003 | 0.004 | < 0.003 | < 0.003 | < 0.003 | < 0.003 | < 0.005 | < 0.003 | < 0.003 | -- | -- | -- | -- |
| **PCBs (mg/kg)** | | | | | | | | | | | | | |
| PCB Aroclor 1016 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1221 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1232 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1242 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1248 | < 0.05 | < 0.06 | < 0.05 | 0.2 | < 0.05 | 0.1 | < 0.1 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1254 | 0.1 | 0.3 | 0.1 | 0.3 | 1.2 D | 0.08 | < 0.1 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1260 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | | | | |
| PCB Aroclor 1262 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| PCB Aroclor 1268 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.05 | < 0.06 | < 0.1 | < 0.05 | < 0.05 | -- | -- | -- | -- |
| **Total PCBs** | 0.1 | 0.3 | 0.1 | 0.5 | 1.2 | 0.18 | 0 | 0 | 0 | 1 | 4 | < 2 | < 2 |
| **Total Metals (mg/kg)** | | | | | | | | | | | | | |
| Arsenic | 2.58 | < 0.99 | 3.94 | 5.81 | 1.83 | 6.55 | 6.92 | 2.62 | 3.29 | 20 | 20 | 40 | 40 |
| Barium | 35.2 | 13 | 14.2 | 24.1 | 18.4 | 86.3 | 55.4 | 11.3 | 13 | 1000 | 3000 | -- | -- |
| Cadmium | < 0.36 | < 0.49 | < 0.39 | < 0.46 | < 0.37 | < 0.45 | < 0.7 | < 0.39 | < 0.38 | 80 | 80 | 80 | 30 |
| Chromium | 7.1 | 5.09 | 9.6 | 19.8 | 3.76 | 12.1 | 9.25 | 5.07 | 6.43 | 100 | 200 | 1000 | 1000 |
| Lead | 34 | 35.2 | 19.4 | 27.3 | 39.4 | 347 | 21.4 | 6.81 | 12.8 | 200 | 600 | 2000 | 1000 |
| Mercury | 0.08 | < 0.03 | 0.13 | 0.093 | 0.069 | 0.575 | < 0.063 | < 0.035 | < 0.031 | 20 | 40 | 10 | 10 |
| Selenium | < 3.59 | < 4.95 | < 3.92 | < 4.58 | < 3.66 | < 4.54 | < 6.98 | < 3.9 | < 3.76 | 400 | 800 | -- | -- |
| Silver | < 0.36 | < 0.49 | < 0.39 | < 0.46 | < 0.37 | < 0.45 | < 0.7 | < 0.39 | < 0.38 | 100 | 200 | -- | -- |
| **TCLP (mg/L)** | | | | | | | | | | | | | |
| Lead TCLP (mg/L) | -- | -- | -- | -- | -- | 0.72 | -- | -- | -- | -- | -- | -- | -- |
| **General Chemistry** | | | | | | | | | | | | | |
| Corrosivity (pH) | 7.96 | 7.35 | 7.58 | 6.9 | 7.1 | 6.7 | 7.28 | 6.78 | 6.53 | -- | -- | -- | -- |
| **Physical Conditions** | | | | | | | | | | | | | |
| Flashpoint (°F) | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | > 200 | -- | -- | -- | -- |
| Reactivity - Cyanide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 3.7 | < 2 | < 2 | -- | -- | -- | -- |
| Reactivity - Sulfide (mg/kg) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | -- | -- | -- | -- |
| Specific Conductance @ 25°C (µmhos/cm) | 473 | 71 | 104 | 177 | 30 | 562 | 328 | 9 | 35 | -- | -- | 8000 | 4000 |

Notes:
Laboratory analytical results compared to RCS-1, RCS-2,
VOCs = Volatile Organic Carbons; SVOCs = Semi-Volat
D = identified in an analysis that has been diluted
P = pesticide target analyte had a % difference > 25% bet
< = not detected above laboratory reporting limit
-- = Not Tested
NS = No Standard
Exceedance of MassDEP MCP RCS-1
Exceedance of MassDEP MCP RCS-1 & RCS-2
Exceedance of COMM-97 - Lined Landfill criteria
Exceedance of COMM-97 - Unlined Landfill criteria

# EXHIBIT B
# HISTORICAL FIGURES BY OTHERS

**SHUSTER PROPERTY (FMR RIST LLC)**

**RTN: 4-23736**




Apex Companies, LLC.

184 HIGH STREET
SUITE 502
BOSTON MA 02110
(617) 728-0070

REVISIONS

| # | DATE | DESCRIPTION |
|---|---|---|
| 1 | 7/11/11 | LAND BORINGS |

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2. PROPERTY LINES AND OWNERSHIP SHOWN HEREON ARE FOR REFERENCE ONLY AND BASED ON AN ELECTRONIC PLAN PROVIDED BY THOMPSON FARLAND, INC. THIS PLAN IS NOT INTENDED TO BE USED AS A PLAN OF RECORD, OR FOR THE DETERMINATION OF PROPERTY LINES, BOUNDARIES, OR LINES OF OWNERSHIP.
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4. STRUCTURES AND FEATURES LOCATED BEYOND THE PROJECT LIMITS, ARE TAKEN FROM AN AERIAL SURVEY CONDUCTED BY THE ARMY CORPS OF ENGINEERS AND SHOULD BE CONSIDERED APPROXIMATE.

B9/MW-6 BORING/MONITORING WELL LOCATION

OVER WATER GEOTECHNICAL BORING

TP6 LARGE TEST PIT BOUNDARIES

SMALL TEST PIT LOCATION

PROPOSED EXCAVATION
PCB CONCENTRATION > 50 PPM

PROPOSED EXCAVATION
EPH/TPH CONCENTRATION > 10,000 PPM

**PREPARED FOR:**

MASSACHUSETTS
CLEAN ENERGY
CENTER

**DRAWING TITLE:**

SAMPLE LOCATION PLAN – UPLAND INVESTIGATION AT SHUSTER PROPERTY AND UNOCCUPIED SHUSTER PROPERTY

Scale: 1"=50'

0 25 50 100 150 FEET

| | |
|---|---|
| Date | 10/28/10 |
| Proj. Mgr. | |
| Design | CWM |
| Check | JAB |
| Drawn | GCD |
| Job. No. | 6690 |
| Last Rev. | 11/22/10 |

Drawing No.

FIG. 2

P:\Jobs\6690 NBH_ Phase IV\PLANS\SHUSTER_UPLAND_9-26-11.dwg, 9/26/2011 3:20:04 PM, DWG To PDF.pc3

Apex Companies, LLC.

184 HIGH STREET
SUITE 502
BOSTON MA 02110
(617) 728-0070

REVISIONS

| # | DATE | DESCRIPTION |
|---|---|---|
| 1 | 7/11/11 | LAND BORINGS |

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NOTES:

1. THE PROPOSED BORING LOCATIONS SHOWN HEREON ARE APPROXIMATE.
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B9/MW-6 BORING/MONITORING WELL LOCATION

OVER WATER GEOTECHNICAL BORING

TP6 LARGE TEST PIT BOUNDARIES

SMALL TEST PIT LOCATION

PROPOSED EXCAVATION
PCB CONCENTRATION > 50 PPM

PROPOSED EXCAVATION
EPH/TPH CONCENTRATION > 10,000 PPM

**PREPARED FOR:**

MASSACHUSETTS
CLEAN ENERGY
CENTER

**DRAWING TITLE:**

# NEW BEDFORD MARINE COMMERCE TERMINAL PCB SAMPLE RESULTS

Scale: 1"=50'

0 25 50 100 150 FEET

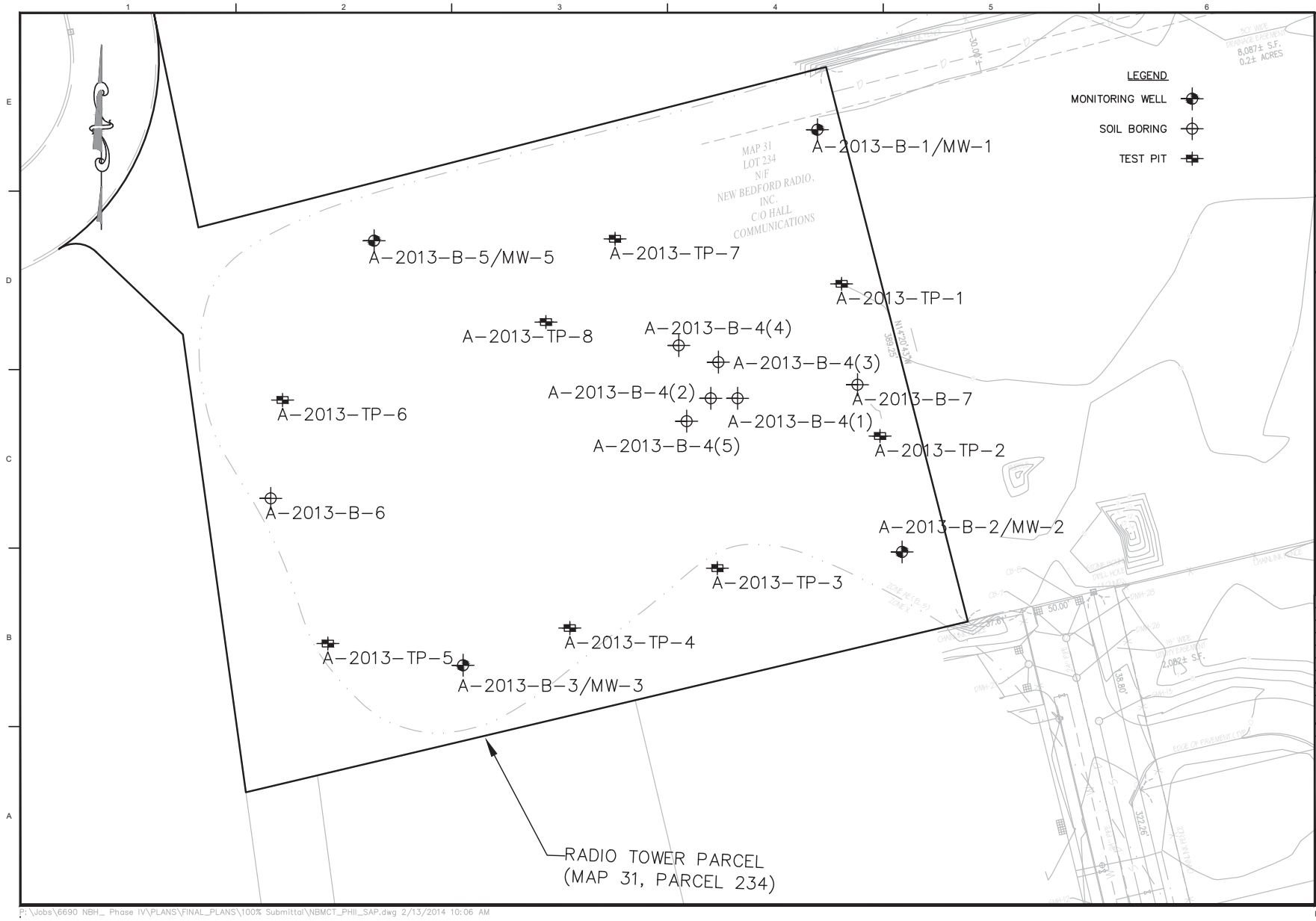
| | |
|---|---|
| Date | 10/28/10 |
| Proj. Mgr. | |
| Design | CWM |
| Check | JAB |
| Drawn | GCD |
| Job. No. | 6690 |
| Last Rev. | 11/22/10 |

Drawing No.

FIG. 3

**NEW BEDFORD RADIO (HALL COMM)**

**RTN: 4-25350**




APEX
ROCKVILLE, MD
SOUTH WINDSOR, CT - BOSTON, MA - NEW BEDFORD, MA - HOLYOKE, MA
184 HIGH STREET, SUITE 502
BOSTON, MA 02210
585 CONNECTICUT AVENUE
SOUTH WINDSOR, CT

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PROJECT
NEW BEDFORD
MARINE COMMERCE
TERMINAL

OWNER
MASSACHUSETTS CLEAN ENERGY CENTER
55 SUMMER STREET, 9TH FLOOR
BOSTON, MA 02110

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|

| | |
|---|---|
| PROJECT NO. | 6690 |
| CADD FILE | NBMCT_PHII_SAP |
| DESIGNED BY | |
| DRAWN BY | |
| CHECKED BY | |
| DATE | 2/11/14 |
| DRAWING SCALE | 1"=60' |

GRAPHIC SCALE
SCALE: 1" = 60'
0 30 60

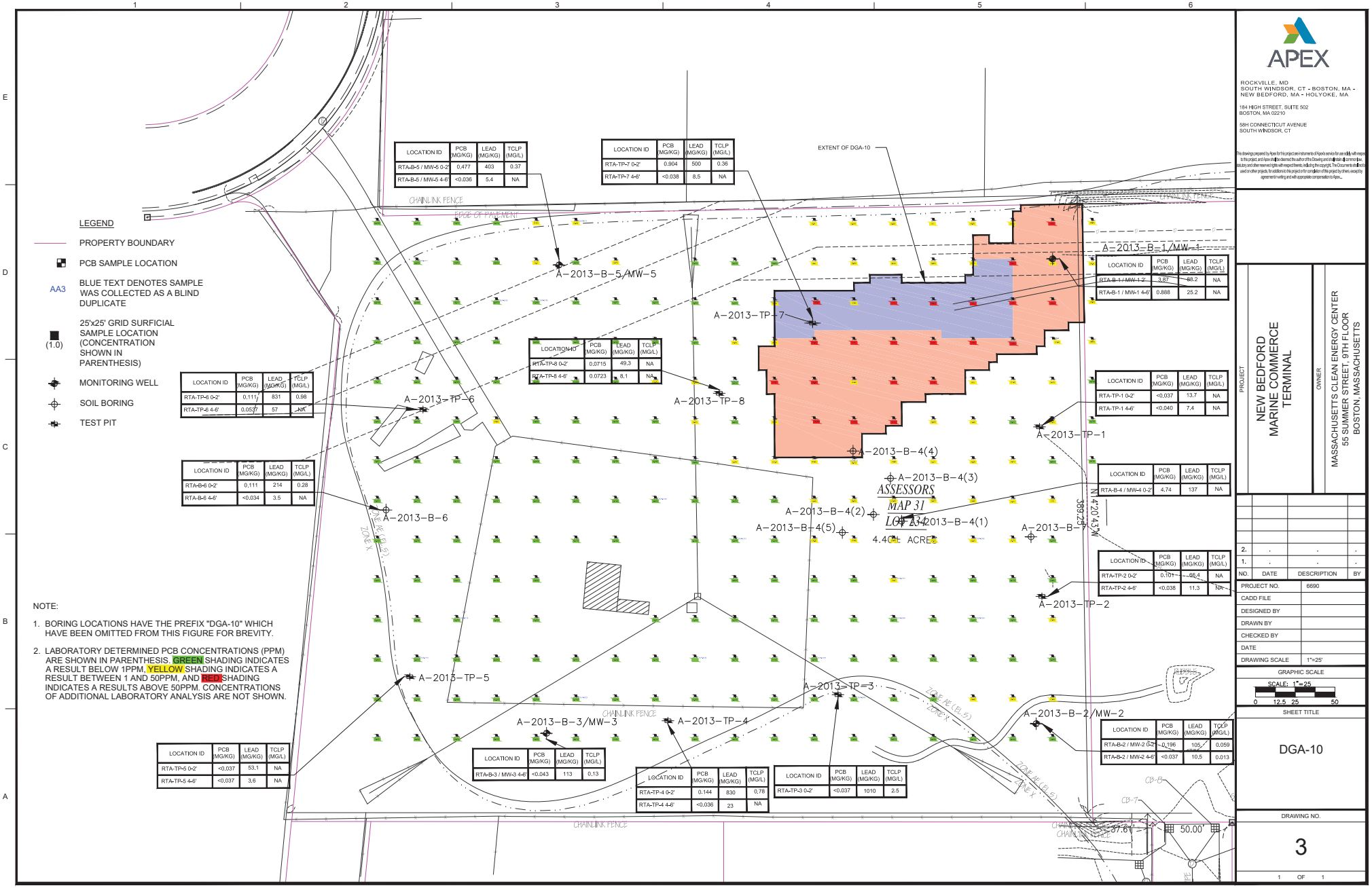
SHEET TITLE
BORING, TEST PIT, & GROUNDWATER MONITORING WELL LOCATION PLAN

DRAWING NO.
FIG. 2

2 OF 2

P:\Jobs\6690 NBH_ Phase IV\PLANS\FINAL_PLANS\100% Submittal\NBMCT_PHII_SAP.dwg 2/13/2014 10:06 AM

PLOT SCALE




NOTE:

1. BORING LOCATIONS HAVE THE PREFIX "DGA-10" WHICH HAVE BEEN OMITTED FROM THIS FIGURE FOR BREVITY.
2. LABORATORY DETERMINED PCB CONCENTRATIONS (PPM) ARE SHOWN IN PARENTHESIS. GREEN SHADING INDICATES A RESULT BELOW 1PPM, YELLOW SHADING INDICATES A RESULT BETWEEN 1 AND 50PPM, AND RED SHADING INDICATES A RESULTS ABOVE 50PPM. CONCENTRATIONS OF ADDITIONAL LABORATORY ANALYSIS ARE NOT SHOWN.

APEX
ROCKVILLE, MD
SOUTH WINDSOR, CT - BOSTON, MA - NEW BEDFORD, MA - HOLYOKE, MA
184 HIGH STREET, SUITE 502
BOSTON, MA 02210
58H CONNECTICUT AVENUE
SOUTH WINDSOR, CT

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PROJECT: NEW BEDFORD MARINE COMMERCE TERMINAL

OWNER: MASSACHUSETTS CLEAN ENERGY CENTER
55 SUMMER STREET, 9TH FLOOR
BOSTON, MASSACHUSETTS

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 2. | . | . | . |
| 1. | . | . | . |

| | |
|---|---|
| PROJECT NO. | 6690 |
| CADD FILE | |
| DESIGNED BY | |
| DRAWN BY | |
| CHECKED BY | |
| DATE | |
| DRAWING SCALE | 1"=25' |

GRAPHIC SCALE
SCALE: 1"=25'
0 12.5 25 50

SHEET TITLE
DGA-10

DRAWING NO.
3

1 OF 1

P:\Jobs\6690 NBH_ Phase IV\PLANS\FINAL_PLANS\CONSTRUCTION\P-1.2_PCB_CONFIRM_SAMPLE_PLAN_RadioTower_Dec2013.dwg 6/26/2014 10:52 AM

LEGEND

- PCB SAMPLE LOCATION
- AA3 — BLUE TEXT DENOTES SAMPLE WAS COLLECTED AS A BLIND DUPLICATE
- APPROXIMATE LIMITS OF HOTSPOT EXCAVATION TO 2' BGS.
- APPROXIMATE LIMITS OF HOTSPOT EXCAVATION TO 3' BGS.
- DENOTES SOIL BORING LOCATION
- (1.0) — 25'x25' GRID SURFICIAL SAMPLE LOCATION (CONCENTRATION SHOWN IN PARENTHESIS)

NOTE:

1. BORING LOCATIONS HAVE THE PREFIX "DGA-10" WHICH HAVE BEEN OMITTED FROM THIS FIGURE FOR BREVITY.
2. LABORATORY DETERMINED PCB CONCENTRATIONS (PPM) ARE SHOWN IN PARENTHESIS. GREEN SHADING INDICATES A RESULT BELOW 1PPM, YELLOW SHADING INDICATES A RESULT BETWEEN 1 AND 50PPM, AND RED SHADING INDICATES A RESULTS ABOVE 50PPM. CONCENTRATIONS OF ADDITIONAL LABORATORY ANALYSIS ARE NOT SHOWN.

DGA-10


APEX

ROCKVILLE, MD
SOUTH WINDSOR, CT - BOSTON, MA -
NEW BEDFORD, MA - HOLYOKE, MA

184 HIGH STREET, SUITE 502
BOSTON, MA 02210

58H CONNECTICUT AVENUE
SOUTH WINDSOR, CT



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PROJECT
NEW BEDFORD
MARINE COMMERCE
TERMINAL

OWNER
MASSACHUSETTS CLEAN ENERGY CENTER
55 SUMMER STREET, 9TH FLOOR
BOSTON, MASSACHUSETTS

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 2. | . | . | . |
| 1. | . | . | . |

| | |
|---|---|
| PROJECT NO. | 6690 |
| CADD FILE | |
| DESIGNED BY | |
| DRAWN BY | |
| CHECKED BY | |
| DATE | |
| DRAWING SCALE | 1"=10' |

GRAPHIC SCALE
SCALE: 1"=10'
0 5 10 20

SHEET TITLE

DGA-10

DRAWING NO.

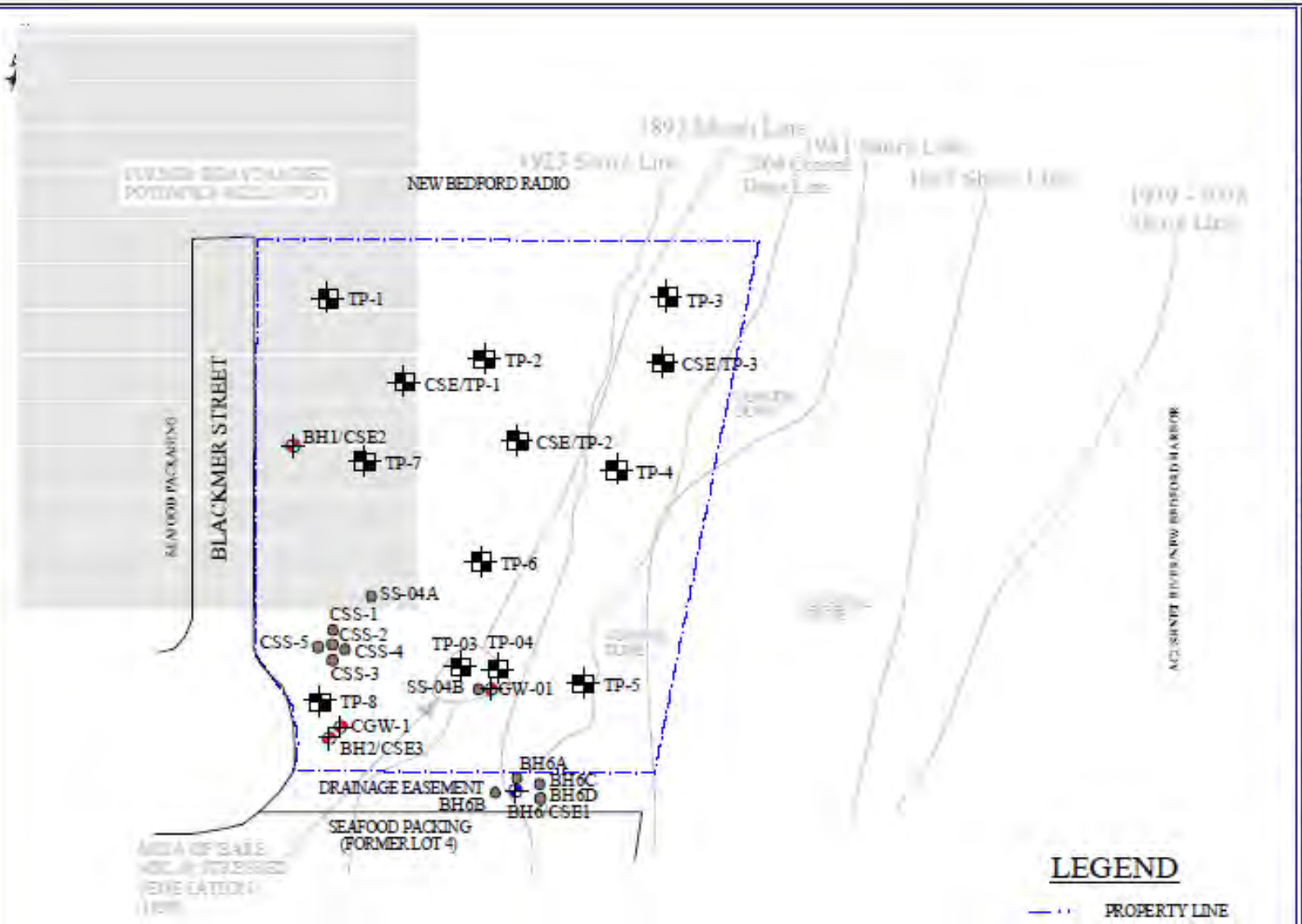
1

1 OF 1

P:\Jobs\6690 NBH_ Phase IV\PLANS\FINAL_PLANS\CONSTRUCTION\P-1.2_PCB_CONFIRM_SAMPLE_PLAN_RadioTower_Dec2013.dwg 6/26/2014 10:53 AM

**DMF PARCEL 1 / DMF PARCEL 2**

**RTNS: 4-24296, 4-15490**




NOTES:
1) SITE FEATURES, BOUNDARIES AND SAMPLE LOCATIONS DERIVED FROM FIELD MEASUREMENTS AND OBSERVATIONS.
2) BASE MAP GENERATED FROM HISTORIC REFERENCES AND HISTORIC ASSESSMENT REPORTS PREPARED BY M&E AND CYGNUS.
3) ALL LOCATIONS AND SCALES ARE APPROXIMATE.

GRAPHICAL SCALE
50 0 25 50

COMMON SENSE ENVIRONMENTAL, INC.
[illegible]
DARTMOUTH, MASSACHUSETTS 02748
PHONE: 508-991-3491

DRAWN BY: KJB
PROJ. MGR: KJB
PROJECT NO: W024
SCALE: NOTED
DATE: 9/24/08

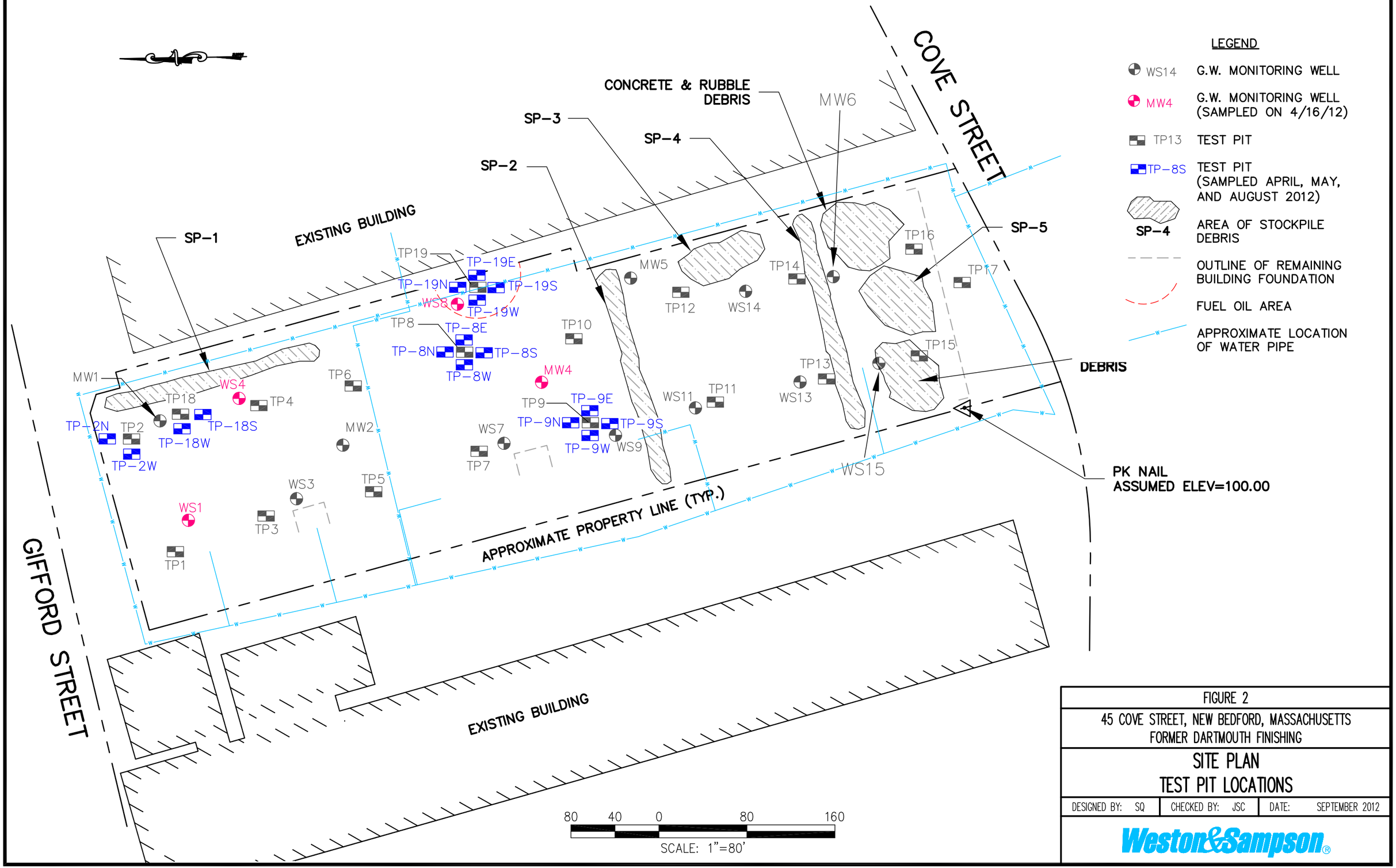
# MASTER SAMPLING PLAN

FORMER LOT 3
16 BLACKMER STREET
NEW BEDFORD, MASSACHUSETTS

FIGURE NUMBER:
8

**FORMER DARTMOUTH FINISHING SITE**

**RTN: 4-23616**




LEGEND

- WS14 — G.W. MONITORING WELL
- MW4 — G.W. MONITORING WELL (SAMPLED ON 4/16/12)
- TP13 — TEST PIT
- TP-8S — TEST PIT (SAMPLED APRIL, MAY, AND AUGUST 2012)
- SP-4 — AREA OF STOCKPILE DEBRIS
- OUTLINE OF REMAINING BUILDING FOUNDATION
- FUEL OIL AREA
- APPROXIMATE LOCATION OF WATER PIPE

FIGURE 2

45 COVE STREET, NEW BEDFORD, MASSACHUSETTS
FORMER DARTMOUTH FINISHING

SITE PLAN
TEST PIT LOCATIONS

| DESIGNED BY: SQ | CHECKED BY: JSC | DATE: SEPTEMBER 2012 |
|---|---|---|

Weston&Sampson®

O:\New Bedford - Cove St\Cove St\Reports\Phase II Documents\Supplemental Phase II\CADD\cove street 09212012.dwg

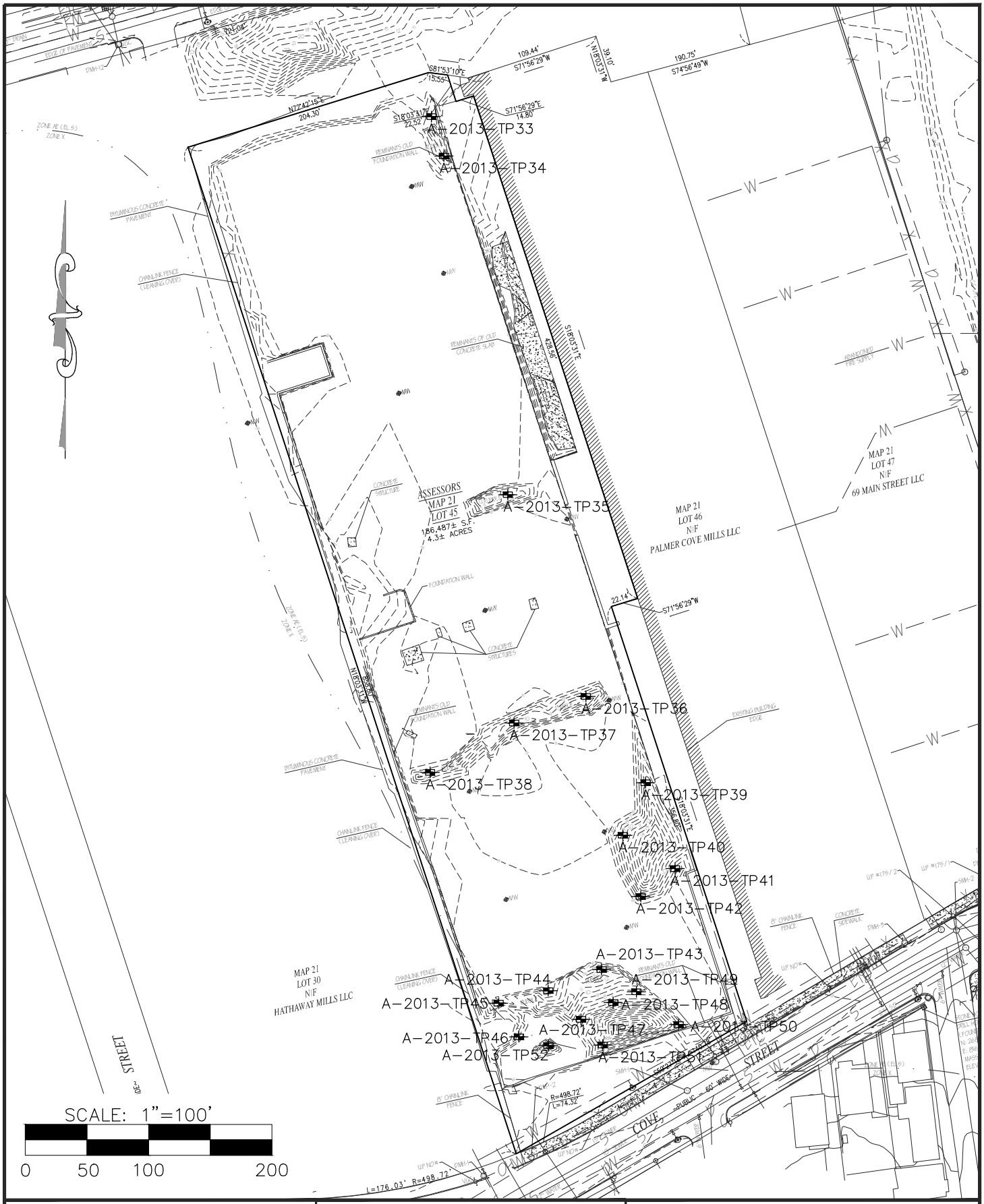



Figure 5:
STOCKPILE SAMPLING
LOCATION MAP
DARTMOUTH FINISHING

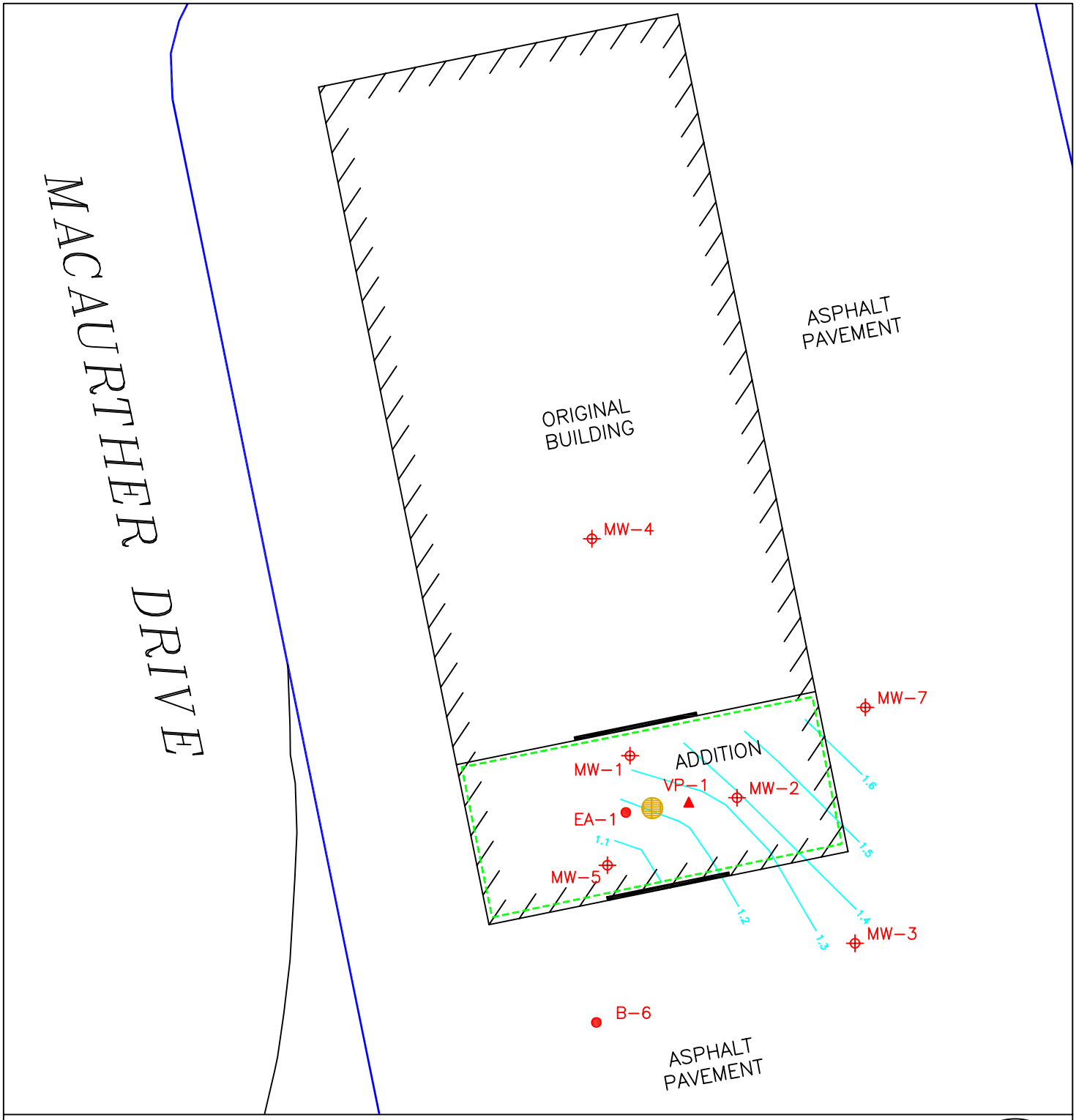
New Bedford
Marine Commerce Terminal

APEX

125 Broad Street
Boston, Massachusetts
Phone: (617) 728-0070

**CP BRODEUR, INC.**

**RTN: 4-23643**




LEGEND

- APPX. PROPERTY LINES
- MW-1 GROUNDWATER MONITORING WELL
- B-1 SOIL BORING ONLY
- VP-1 SOIL VAPOR PROBE
- OIL/WATER SEPERATOR
- INFERRED SITE/RAO BOUNDRY
- OVERHEAD DOOR
- 1.1 INFERRED GROUNDWATER CONTOUR AND ELEVATION

NOTES: ALL LOCATIONS ARE CONSIDERED APPROXIMATE

FIGURE 2

PROPERTY/SITE SKETCH

*appx. scale:*

1"=20'

0 10 20

CP BRODEUR, INC.
80 WRIGHT STREET
NEW BEDFORD, MASSACHUSETTS

SITEC ENVIRONMENTAL
769 Plain Street, Unit C
Marshfield, MA 02050
Tel. (781) 319-0100 FAX (781) 834-4783

# EXHIBIT B
# HISTORICAL TABLES BY OTHERS

**SHUSTER PROPERTY (FMR RIST LLC)**

**RTN: 4-23736**

**Table 1**
**Analytical Testing Summary: Soil**
**New Bedford Marine Commerce Terminal**
**New Bedford, Massachusetts**

| Sample ID | PCBs | VOCs | SVOCs | Metals | TPH | MA VPH | MA EPH | TCLP-Pb |
|---|---|---|---|---|---|---|---|---|
| TP-1 | x | | | x | x | | | |
| TP-2 | x | | | x | x | | | x |
| TP-3 | x | x | x | x | x | x | x | |
| TP-4 | x | | | x | x | | | x |
| TP-5 | x | | | x | x | | | x |
| TP-6 | x | x | x | x | x | x | x | |
| TP-8 | x | | | x | x | | | |
| TP-9 | x | | | x | x | | | |
| TP-10 | x | | | x | x | | | |
| TP-11 | x | | | x | x | | | |
| TP-12 | x | | | x | x | | | x |
| TP-14 | x | | | x | x | | | |
| TP-16 | x | | | x | x | | | |
| DUPLICATE 1 | x | x | x | x | x | x | x | |
| DUPLICATE 2 | x | x | x | x | x | x | x | |
| TP6-1-N-H | x | x | x | | | | x | |
| TP6-2-N-M | x | x | x | | | | x | |
| TP6-3-N-A | x | x | x | | | | x | |
| TP6-3-N-B | x | x | x | | | | x | |
| TP6-2-W-A | x | x | x | | | | x | |
| TP6-2-W-M | x | x | x | | | | x | |
| TP6-2-W-B | x | x | x | | | | x | |
| TP6-1-NW-A | x | | | | | | x | |
| TP6-1-NW-M | x | | | | | | x | |
| TP6-1-NW-B | x | | | | | | x | |
| TP6-2-NW-A | x | | | | | | x | |
| TP6-2-NW-M | x | | | | | | x | |
| TP6-2-NW-B | x | | | | | | x | |
| TP6-1-NE-A | x | | | | | | x | |
| TP6-1-NE-M | x | | | | | | x | |
| TP6-1-NE-B | x | | | | | | x | |
| TP6-3-NE-A | x | | | | | | x | |
| TP6-3-NE-M | x | | | | | | x | |
| TP6-3-NE-B | x | | | | | | x | |
| TP6-5-NE-A | x | | x | | | | x | |
| TP6-5-NE-M | x | | x | | | | x | |
| TP6-5-NE-B | x | | x | | | | x | |

**Table 1**
**Analytical Testing Summary: Soil**
**New Bedford Marine Commerce Terminal**
**New Bedford, Massachusetts**

| Sample ID | PCBs | VOCs | SVOCs | Metals | TPH | MA VPH | MA EPH | TCLP-Pb |
|---|---|---|---|---|---|---|---|---|
| TP6-7-NW-A | x | | x | | | | x | |
| TP6-7-NW-M | x | | x | | | | x | |
| TP6-7-NW-B | x | | x | | | | x | |
| TP2-1-W-H | x | x | x | | | | x | |
| TP2-2-W-M | x | x | x | | | | x | |
| TP2-4-W-A | x | x | x | | | | x | |
| TP2-4-W-B | x | x | x | | | | x | |
| TP3-1-S | x | | x | | | | x | |
| TP3-2-S-A | x | | x | | | | x | |
| TP3-2-S-M | x | | x | | | | x | |
| TP3-2-S-B | x | x | x | | | | x | |
| TP4-1-E | x | x | x | | | | x | |
| TP4-1-S-A | x | | x | | | | x | |
| TP4-1-S-M | x | | x | | | | x | |
| TP4-1-S-B | x | | x | | | | x | |
| TP4-1-W-A | x | | x | | | | x | |
| TP4-1-W-M | x | | x | | | | x | |
| TP4-1-W-B | x | | x | | | | x | |
| TP4-2-W | x | | x | | | | x | |
| TP-9-1-E | x | | | | | | | |
| TP-9-1-W | x | | | | | | | |
| TP-9-1-N | x | | | | | | | |
| TP-9-1-S | x | | | | | | | |
| B-5/MW-3 | x | | | x | | | | |
| B-6/MW-4 | x | | | x | | | | |
| B-7 | x | | | x | | | | |
| B-8/MW-5 | x | | | x | | | | x |
| B-9/MW-6 | x | | | x | | | | |
| B-11/MW-7 | x | x | | x | | x | x | |
| B-12/MW-8A | x | x | | x | | x | x | |
| B-12/MW-8B | x | x | | x | | x | x | |
| TP4-2NW-A | x | | | | | | | |
| TP4-2NW-M | x | | | | | | | |
| TP4-2NW-B | x | | | | | | | |
| TP4-1N-A | x | | | | | | | |
| TP4-1N-M | x | | | | | | | |
| TP4-1N-B | x | | | | | | | |

**Table 1**
**Analytical Testing Summary: Soil**
**New Bedford Marine Commerce Terminal**
**New Bedford, Massachusetts**

| Sample ID | PCBs | VOCs | SVOCs | Metals | TPH | MA VPH | MA EPH | TCLP-Pb |
|---|---|---|---|---|---|---|---|---|
| TP4-2N-A | x | | | | | | | |
| TP4-2N-M | x | | | | | | | |
| TP4-2N-B | x | | | | | | | |
| TP4-1NE-A | x | | | | | | | |
| TP4-1NE-M | x | | | | | | | |
| TP4-1NE-B | x | | | | | | | |
| TP4-3W-A | x | | | | | | | |
| TP4-3W-M | x | | | | | | | |
| TP4-3W-B | x | | | | | | | |
| TP4-4W-A | x | | | | | | | |
| TP4-4W-M | x | | | | | | | |
| TP4-4W-B | x | | | | | | | |
| TP4-5W-A | x | | | | | | | |
| TP4-5W-M | x | | | | | | | |
| TP4-5W-B | x | | | | | | | |
| TP4-1NW-A | x | | | | | | | |
| TP4-1NW-M | x | | | | | | | |
| TP4-1NW-B | x | | | | | | | |
| TP2-1E-A | x | | | | | | | |
| TP2-1E-M | x | | | | | | | |
| TP2-1E-B | x | | | | | | | |
| TP6-1S | | | | | | | x | |
| TP63W | | | | | | | x | |
| TP6-8NW | | | | | | | x | |
| TP6-4N | | | | | | | x | |
| TP6-6NE | | | | | | | x | |
| TP2-1E | | | | | | | x | |
| TP2-2E | | | | | | | x | |
| TP4-1NE | | | | | | | x | |

**Table 2**
**Analytical Testing Summary: Groundwater**
**New Bedford Marine Commerce Terminal**
**New Bedford, Massachusetts**

| Sample ID | PCBs | VOCs | SVOCs | Metals | TPH | VPH | EPH |
|---|---|---|---|---|---|---|---|
| MW-3 | x | x | x | x | x | | |
| MW-4 | x | x | x | x | x | | |
| MW-5 | x | x | x | x | x | | |
| MW-6 | x | x | x | x | x | | |
| MW-7 | x | x | x | x | x | x | x |
| MW-8 | x | x | x | x | x | x | x |

# Table 3
# PCBs (Aroclors) -
# Test Pit Soil Analytical Data
# New Bedford Marine Commerce Terminal
# New Bedford, Massachusetts

| Sample Name | Collection Date | Aroclor 1016/1242 | Aroclor 1221 | Aroclor 1232 | Aroclor 1248 | Aroclor 1254 | Aroclor 1260 | Estimate of Total PCBs (Summation of reported Aroclors) (mg/kg) |
|---|---|---|---|---|---|---|---|---|
| TP-1 | 4/25/2011 | 0.06U | 0.06U | 0.06U | 0.06U | 0.086 | 0.06U | 0.086 |
| TP-2 | 4/25/2011 | 1.1U | 1.1U | 1.1U | 1.1U | 75 | 1.1U | 75 |
| TP-5 | 4/25/2011 | 0.31U | 0.31U | 0.31U | 0.31U | 0.31U | 0.31U | ND |
| TP-4 | 4/25/2011 | 6.2U | 6.2U | 6.2U | 6.2U | 610 | 6.2U | 610 |
| TP-3 | 4/25/2011 | 0.53J | 0.17U | 0.17U | 0.52J | 12.0 | 0.17U | 13.1 |
| TP-6 | 4/26/2011 | 0.0067U | 0.0067U | 0.0067U | 0.0067U | 0.11 | 0.0067U | 0.11 |
| TP-8 | 4/26/2011 | 0.0058U | 0.0058U | 0.0058U | 0.0058U | 0.014 | 0.0058U | 0.014 |
| TP-9 | 4/26/2011 | 0.77U | 0.77U | 0.77U | 0.77U | 4.6 | 0.77U | 4.6 |
| TP-11 | 4/26/2011 | 0.0054U | 0.0054U | 0.0054U | 0.0054U | 0.032 | 0.0054U | 0.032 |
| TP-10 | 4/27/2011 | 0.0058U | 0.0058U | 0.0058U | 0.0058U | 0.22 | 0.0058U | 0.22 |
| TP-12 | 4/27/2011 | 0.0062U | 0.0062U | 0.0062U | 0.0062U | 0.11 | 0.0062U | 0.11 |
| TP-14 | 4/27/2011 | 0.0059 | 0.0059 | 0.0059 | 0.0059 | 0.1 | 0.0059 | 0.1 |
| TP-16 | 4/27/2011 | 0.0061U | 0.0061U | 0.0061U | 0.0061U | 0.03 | 0.0061U | 0.03 |
| DUPLICATE 1* | 4/25/2011 | 0.57U | 0.57U | 0.57U | 0.57U | 3.1 | 0.57U | 3.1 |
| DUPLICATE 2** | 4/26/2011 | 0.0067U | 0.0067U | 0.0067U | 0.0067U | 0.1 | 0.0067U | 0.1 |
| TP6-1-N-H | 7/18/2011 | 0.0099U | 0.0099U | 0.0099U | 0.0099U | 0.019 | 0.0099U | 0.019 |
| TP6-2-N-M | 7/18/2011 | 0.0068U | 0.0068U | 0.0068U | 0.0068U | 0.0068U | 0.0068U | ND |
| TP6-3-N-A | 7/18/2011 | 0.0059U | 0.0059U | 0.0059U | 0.0059U | 0.540 | 0.019 | 0.559 |
| TP6-3-N-B | 7/18/2011 | 0.0062U | 0.0062U | 0.0062U | 0.0062U | 0.0062U | 0.0062U | ND |
| TP6-2-W-A | 7/19/2011 | 0.0058U | 0.0058U | 0.0058U | 0.0058U | 1.7 | 0.0058U | 1.7 |
| TP6-2-W-M | 7/19/2011 | 0.019U | 0.019U | 0.019U | 0.019U | 0.019U | 0.019U | ND |
| TP6-2-W-B | 7/19/2011 | 0.0056U | 0.0056U | 0.0056U | 0.0056U | 0.0056U | 0.0056U | ND |
| TP6-1-NW-A | 7/22/2011 | 0.0059U | 0.0059U | 0.0059U | 0.0059U | 1.7 | 0.0059U | 1.7 |
| TP6-1-NW-M | 7/22/2011 | 0.0052U | 0.0052U | 0.0052U | 0.0052U | 0.28 | 0.140 | 0.42 |
| TP6-1-NW-B | 7/22/2011 | 0.006U | 0.006U | 0.006U | 0.006U | 0.047 | 0.006U | 0.047 |
| TP6-2-NW-A | 7/22/2011 | 0.015U | 0.015U | 0.015U | 0.015U | 2.3 | 0.094 | 2.394 |
| TP6-2-NW-M | 7/22/2011 | 0.0054U | 0.0054U | 0.0054U | 0.0054U | 0.0054U | 0.0054U | ND |
| TP6-2-NW-B | 7/22/2011 | 0.006U | 0.006U | 0.006U | 0.006U | 0.006U | 0.006U | ND |
| TP6-1-NE-A | 7/22/2011 | 0.0051U | 0.0051U | 0.0051U | 0.0051U | 0.25 | 0.0096 | 0.2596 |
| TP6-1-NE-M | 7/22/2011 | 0.0062U | 0.0062U | 0.0062U | 0.0062U | 0.35 | 0.0062U | 0.35 |
| TP6-1-NE-B | 7/22/2011 | 0.0051U | 0.0051U | 0.0051U | 0.0051U | 0.028 | 0.0051U | 0.028 |
| TP6-3-NE-A | 7/22/2011 | 0.0055U | 0.0055U | 0.0055U | 0.0055U | 0.025 | 0.0055U | 0.025 |
| TP6-3-NE-M | 7/22/2011 | 0.0055U | 0.0055U | 0.0055U | 0.0055U | 0.0055U | 0.0055U | ND |
| TP6-3-NE-B | 7/22/2011 | 0.0058U | 0.0058U | 0.0058U | 0.0058U | 0.019 | 0.0058U | 0.019 |
| TP6-5-NE-A | 7/25/2011 | 0.0051U | 0.0051U | 0.0051U | 0.0051U | 0.0051U | 0.0051U | ND |
| TP6-5-NE-M | 7/25/2011 | 0.0059U | 0.0059U | 0.0059U | 0.0059U | 0.042 | 0.0059U | 0.042 |
| TP6-5-NE-B | 7/25/2011 | 0.0066U | 0.0066U | 0.0066U | 0.0066U | 0.0066U | 0.0066U | ND |
| TP6-7-NW-A | 7/25/2011 | 0.0056U | 0.0056U | 0.0056U | 0.0056U | 0.11 | 0.0056U | 0.11 |
| TP6-7-NW-M | 7/25/2011 | 0.0059U | 0.0059U | 0.0059U | 0.0059U | 0.0059U | 0.0059U | ND |
| TP6-7-NW-B | 7/25/2011 | 0.0066U | 0.0066U | 0.0066U | 0.0066U | 0.0066U | 0.0066U | ND |
| TP2-2-W-H | 7/19/2011 | 0.0058U | 0.0058U | 0.0058U | 0.0058U | 0.0058U | 0.0058U | ND |
| TP2-2-W-M | 7/19/2011 | 0.0056U | 0.0056U | 0.0056U | 0.0056U | 0.0056U | 0.0056U | ND |
| TP2-4-W-A | 7/19/2011 | 0.0077 | 0.0055U | 0.0055U | 0.0055U | 0.170 | 0.012 | 0.0077 |
| TP2-4-W-B | 7/19/2011 | 0.0057U | 0.0057U | 0.0057U | 0.0057U | 0.087 | 0.0059 | 0.093 |
| TP3-1-S | 7/19/2011 | 0.0069U | 0.0069U | 0.0069U | 0.0069U | 0.0069U | 0.0069U | ND |
| TP3-2-S-A | 7/19/2011 | 0.0058U | 0.0058U | 0.0058U | 0.0058U | 1.3 | 0.06 | 1.36 |
| TP3-2-S-M | 7/19/2011 | 0.0056U | 0.0056U | 0.0056U | 0.0056U | 0.42 | 0.019 | 0.439 |
| TP3-2-S-B | 7/19/2011 | 0.0059U | 0.0059U | 0.0059U | 0.0059U | 0.0059U | 0.0059U | ND |
| TP4-1-E | 7/19/2011 | 0.0067U | 0.0067U | 0.0067U | 0.0067U | 0.57 | 0.0067U | 0.57 |
| TP4-1-S-A | 7/20/2011 | 0.0058U | 0.0058U | 0.0058U | 0.0058U | 0.360 | 0.041 | 0.401 |
| TP4-1-S-M | 7/20/2011 | 0.0056U | 0.0056U | 0.0056U | 0.0056U | 0.0059 | 0.0056U | 0.0059 |
| TP4-1-S-B | 7/20/2011 | 0.0059U | 0.0059U | 0.0059U | 0.0059U | 0.0059U | 0.0059U | ND |
| TP4-1-W-A | 7/20/2011 | 3.1U | 3.1U | 3.1U | 3.1U | 630 | 11 | 641 |
| TP4-1-W-M | 7/20/2011 | 2.9U | 2.9U | 2.9U | 2.9U | 970 | 19 | 989 |
| TP4-1-W-B | 7/20/2011 | 0.006U | 0.006U | 0.006U | 0.023 | 0.170 | 0.006U | 0.193 |
| TP4-2-W | 7/20/2011 | 12U | 12U | 12U | 12U | 480 | 12U | 480 |
| TP-9-1-E | 7/20/2011 | 0.0092U | 0.0092U | 0.0092U | 0.0092U | 0.014 | 0.0092U | 0.014 |
| TP-9-1-W | 7/20/2011 | 0.0075U | 0.0075U | 0.0075U | 0.017 | 0.069 | 0.0075U | 0.086 |
| TP-9-1-N | 7/20/2011 | 0.0097U | 0.0097U | 0.0097U | 0.0097U | 0.0097U | 0.0097U | ND |

# Table 3
# PCBs (Aroclors) -
# Test Pit Soil Analytical Data
# New Bedford Marine Commerce Terminal
# New Bedford, Massachusetts

| Sample Name | Collection Date | Aroclor 1016/1242 | Aroclor 1221 | Aroclor 1232 | Aroclor 1248 | Aroclor 1254 | Aroclor 1260 | Estimate of Total PCBs (Summation of reported Aroclors) (mg/kg) |
|---|---|---|---|---|---|---|---|---|
| TP-9-1-S | 7/20/2011 | 0.0096U | 0.0096U | 0.0096U | 0.0096U | 0.0096U | 0.0096U | ND |
| B-5/MW-3 | 5/4/2011 | 0.0057U | 0.0057U | 0.0057U | 0.0057U | 0.0057U | 0.0057U | ND |
| B-6/MW-4 | 5/5/2011 | 0.0057U | 0.0057U | 0.0057U | 0.0057U | 0.040 | 0.0057U | 0.04 |
| B-7 | 5/6/2011 | 0.0053U | 0.0053U | 0.0053U | 0.0053U | 0.060 | 0.0053U | 0.06 |
| B-8/MW-5 | 5/6/2011 | 0.0057U | 0.0057U | 0.0057U | 0.0057U | 0.020 | 0.0057U | 0.02 |
| B-9/MW-6 | 5/9/2011 | 0.0053U | 0.0053U | 0.0053U | 0.0053U | 0.020 | 0.0053U | 0.02 |
| B-11/MW-7 | 5/12/2011 | 0.0057U | 0.0057U | 0.0057U | 0.0057U | 0.0057U | 0.0057U | ND |
| B-12/MW-8A | 5/13/2011 | 0.011U | 0.011U | 0.011U | 0.011U | 0.011U | 0.011U | ND |
| B-12/MW-8B | 5/13/2011 | 0.0059U | 0.0059U | 0.0059U | 0.0059U | 0.0059U | 0.0059U | ND |
| TP4-2NW-A | 8/11/2011 | 0.0054U | 0.0054U | 0.0054U | 0.0054U | 1.10 | 0.039 | 1.14 |
| TP4-2NW-M | 8/11/2011 | 0.019U | 0.019U | 0.019U | 0.019U | 0.02 | 0.019U | 0.02 |
| TP4-2NW-B | 8/11/2011 | 0.006U | 0.006U | 0.006U | 0.006U | 0.006U | 0.006U | ND |
| TP4-1N-A | 8/11/2011 | 0.0055U | 0.0055U | 0.0055U | 0.0055U | 0.93 | 0.041 | 0.971 |
| TP4-1N-M | 8/11/2011 | 0.12U | 0.12U | 0.12U | 0.12U | 0.12U | 0.12U | ND |
| TP4-1N-B | 8/11/2011 | 0.0063U | 0.0063U | 0.0063U | 0.0063U | 0.0063U | 0.0063U | ND |
| TP4-2N-A | 8/11/2011 | 0.0053U | 0.0053U | 0.0053U | 0.0053U | 0.01 | 0.0053U | 0.01 |
| TP4-2N-M | 8/11/2011 | 0.0056U | 0.0056U | 0.0056U | 0.0056U | 0.01 | 0.0056U | 0.01 |
| TP4-2N-B | 8/11/2011 | 0.017U | 0.017U | 0.017U | 0.017U | 0.017U | 0.017U | ND |
| TP4-1NE-A | 8/11/2011 | 0.0056U | 0.0056U | 0.0056U | 0.0056U | 0.09 | 0.0056U | 0.09 |
| TP4-1NE-M | 8/11/2011 | 0.19U | 0.19U | 0.19U | 0.19U | 0.19U | 0.19U | ND |
| TP4-1NE-B | 8/11/2011 | 0.066U | 0.066U | 0.066U | 0.066U | 0.066U | 0.066U | ND |
| TP4-3W-A | 8/11/2011 | 0.055U | 0.055U | 0.055U | 0.055U | 4.10 | 0.16 | 4.26 |
| TP4-3W-M | 8/11/2011 | 0.0057U | 0.0057U | 0.0057U | 0.0057U | 0.47 | 0.024 | 0.494 |
| TP4-3W-B | 8/11/2011 | 0.0056U | 0.0056U | 0.0056U | 0.0056U | 0.01 | 0.0056U | 0.01 |
| TP4-4W-A | 8/11/2011 | 0.0058U | 0.0058U | 0.0058U | 0.0058U | 0.03 | 0.0058U | 0.03 |
| TP4-4W-M | 8/11/2011 | 0.059U | 0.059U | 0.059U | 0.059U | 0.059U | 0.059U | ND |
| TP4-4W-B | 8/11/2011 | 0.011U | 0.011U | 0.011U | 0.011U | 0.011U | 0.011U | ND |
| TP4-5W-A | 8/11/2011 | 0.0056U | 0.0056U | 0.0056U | 0.0056U | 0.33 | 0.0056U | 0.33 |
| TP4-5W-M | 8/11/2011 | 0.07U | 0.07U | 0.07U | 0.07U | 0.38 | 0.07U | 0.38 |
| TP4-5W-B | 8/11/2011 | 0.01U | 0.01U | 0.01U | 0.01U | 0.01U | 0.01U | ND |
| TP4-1NW-A | 8/11/2011 | 0.0058U | 0.0058U | 0.0058U | 0.0058U | 110.00 | 0.0058U | 110 |
| TP4-1NW-M | 8/11/2011 | 0.095U | 0.095U | 0.095U | 0.095U | 0.15 | 0.095U | 0.15 |
| TP4-1NW-B | 8/11/2011 | 0.0055U | 0.0055U | 0.0055U | 0.0055U | 1.30 | 0.067 | 1.367 |
| TP2-1E-A | 8/11/2011 | 0.0052U | 0.0052U | 0.0052U | 0.0052U | 0.01 | 0.0052U | 0.01 |
| TP2-1E-M | 8/11/2011 | 0.0054U | 0.0054U | 0.0054U | 0.0054U | 0.01 | 0.0054U | 0.01 |
| TP2-1E-B | 8/11/2011 | 0.0056U | 0.0056U | 0.0056U | 0.0056U | 0.01 | 0.0056U | 0.01 |
| | | | | | | | | |
| MCP Upper Concentration Limits ( | | NP | NP | NP | NP | NP | NP | 100 |
| MCP S-3/GW-2 | | NP | NP | NP | NP | NP | NP | 3 |
| MCP S-3/GW-3 | | NP | NP | NP | NP | NP | NP | 3 |
| Reporting Category - RCS-2 | | NP | NP | NP | NP | NP | NP | 3 |

**Notes:**

U = Concentration is below the laboratory's method detection limit. One half of the method detection limit is utilized in the summation.

*Duplicate 1 is a duplicate sample of sample TP-3.

**Duplicate 2 is a duplicate sample of sample TP-6.

NP = Not Promulgated

ND = Analyzed Aroclors were non-detected.

J = Estimated value.

Exceedance of MCP Reporting Category and/or Standard, which also exceeds EPA's unrestricted use standard of 1 ppm.

Exceedance of EPA's unrestricted use Standard in High Occupancy Use Areas (e.g., residential) of 1 ppm, but not its respective MCP Reporting Category and/or Standard.

NOTE: EPA Standard for Low Occupancy Use Areas (e.g., commercial) is less than or equal to 25 ppm (and greater than 1 ppm).

A = Shallow Sample

M = Middle Sample

B = Bottom

**Table 4**
**Volatile Organic Compounds**
**Soil Analytical Data**
**South Terminal CDF, New Bedford, Massachusetts**
**concentration in ppm (mg/kg)**

| Sample Name | Collection Date | **Volatile Organics** (mg/kg) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Tetrachloroethene | Benzene | Toluene | Ethylbenzene | p/m-Xylene | o-Xylene | n-Butylbenzene | sec-Butylbenzene | Isopropylbenzene | p-Isopropyltoluene | Naphthalene | n-Propylbenzene | 1,3,5-Trimethylbenzene | 1,2,4-Trimethylbenzene |
| B-11/MW-7 | 5/12/2011 | 0.1U | 0.1U | 0.16U | 1.1 | 0.76 | 0.32 | 0.1U | 0.1U | 0.1U | 0.1U | 12.0 | 0.1U | 0.41U | 0.440 |
| B-12/MW-8 (A) | 5/13/2011 | 0.5U | 6.6 | 0.74U | 7.6 | 10 | 7.2 | 0.5U | 0.5U | 3.2 | 1.8 | 36.0 | 0.5U | 2U | 3.2 |
| B-12/MW-8 (B) | 5/13/2011 | 0.083U | 0.52 | 0.12U | 0.78 | 0.8 | 0.58 | 0.083U | 0.083U | 0.42 | 0.22 | 4.6 | 0.083U | 0.33U | 0.350 |
| TP-3 | 4/25/2011 | 0.089U | 0.089U | 0.130U | 0.089U | 0.180U | 0.180U | 0.089U | 0.089U | 0.089U | 0.089U | 1.5 | 0.089U | 0.350U | 0.350U |
| Duplicate 1* | 4/25/2011 | 0.082U | 0.082U | 0.120U | 0.082U | 0.160U | 0.160U | 0.082U | 0.082U | 0.082U | 0.089 | 1.5 | 0.082U | 0.330U | 0.330U |
| TP-6 | 4/26/2011 | 4.0U | 4.0U | 10 | 2.2 | 20 | 8.1 | 4.0U | 4.0U | 5.9 | 4.2 | 180 | 4.0U | 16.0U | 16.0U |
| Duplicate 2** | 4/26/2011 | 0.820U | 0.820U | 2.2 | 5.8 | 5.4 | 2.2 | 0.820U | 0.820U | 1.8 | 1.4 | 64 | 0.820U | 3.3U | 3.3U |
| TP6-1-N-H | 7/18/2011 | 6.6U | 6.6U | 9.9U | 39 | 15 | 18 | 6.6U | 6.6U | 38 | 43 | 470 | 6.6U | 26.0U | 40 |
| TP6-2-N-M | 7/18/2011 | 0.13U | 0.13U | 0.19U | 0.13U | 0.25U | 0.25U | 0.13U | 0.13U | 0.13U | 0.13U | 0.51U | 0.13U | 0.51U | 0.51U |
| TP6-3-N-A | 7/18/2011 | 0.13U | 0.0013U | 0.002U | 0.0013U | 0.0026U | 0.0026U | 0.0013U | 0.0013U | 0.0013U | 0.0013U | 0.0053U | 0.0013U | 0.0053U | 0.0053U |
| TP6-3-N-B | 7/18/2011 | 0.00095U | 0.00095U | 0.0014U | 0.00095U | 0.0019U | 0.0019U | 0.00095U | 0.00095U | 0.00095U | 0.00095U | 0.0038U | 0.00095U | 0.0038U | 0.0038U |
| TP6-2-W-A | 7/19/2011 | 0.0025U | 0.0025U | 0.0038U | 0.0025U | 0.005U | 0.005U | 0.0025U | 0.0025U | 0.0025U | 0.0025U | 0.01U | 0.0025U | 0.01U | 0.01U |
| TP6-2-W-M | 7/19/2011 | .720U | 2.1 | 1.1U | 5.6 | 4.3 | 2.0 | 0.720U | 0.720U | 0.720U | 0.720U | 2.9U | 0.720U | 2.9U | 2.9U |
| TP6-2-W-B | 7/19/2011 | 0.087U | 0.087U | 0.130U | 0.087U | 0.170U | 0.170U | 0.087U | 0.087U | 0.087U | 0.087U | 0.45 | 0.087U | 0.35U | 0.35U |
| TP2-1-W-H | 7/19/2011 | 0.30 | 0.38 | 0.32 | 4.6 | 5.4 | 2.8 | 1.3 | 0.1 | 1.50 | 1.30 | 340 | 0.77 | 4.70 | 8.80 |
| TP2-2-W-M | 7/19/2011 | 1.8U | 1.8U | 2.8U | 2.9 | 3.7U | 3.7U | 1.8U | 1.8U | 1.8U | 1.8U | 92 | 1.8U | 7.4U | 7.4U |
| TP2-4-W-A | 7/19/2011 | 0.0018U | 0.0016U | 0.0023U | 0.0016U | 0.0031U | 0.0031U | 0.0016U | 0.0016U | 0.0016U | 0.0016U | 0.0062U | 0.160U | 0.0062U | 0.0062U |
| TP2-4-W-B | 7/19/2011 | 0.0019U | 0.0019U | 0.0028U | 0.0019U | 0.0037U | 0.0037U | 0.0019U | 0.0019U | 0.0019U | 0.0019U | 0.0075U | 0.160U | 0.0075U | 0.0075U |
| TP4-1-E | 7/19/2011 | 0.160U | 3.3 | 0.36 | 0.160U | 0.320U | 0.320U | 0.160U | 0.160U | 0.160U | 0.160U | 0.630U | 0.160U | 0.630U | 0.630U |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MCP Upper Concentration Limit (UCL): | 10000 | 9,000 | 10,000 | 10,000 | 10,000 | NP | NP | NP | NP | 10,000 | NP | NP | NP |
| MCP S-1/GW-3 | 30 | 30 | 500 | 500 | 500 | NP | NP | NP | NP | 500 | NP | NP | NP |
| MCP S-3/GW-3 | 1000 | 900 | 3,000 | 3,000 | 3,000 | NP | NP | NP | NP | 3,000 | NP | NP | NP |
| Reporting Category - RCS-2 | 10 | 200 | 1,000 | 1,000 | 300 | NP | NP | 10,000 | NP | 40 | NP | 100 | 10,000 |

**Notes:**
Only detected compounds are reported in the table. Please refer to Appendix _ for a complete listing of analytes.
U = Concentration is below the laboratory's method detection limit.
NP = Not Promulgated
*Duplicate 1 is a duplicate sample of sample TP-3.
**Duplicate 2 is a duplicate sample of sample TP-6.
- Exceedance of Reporting Category and/or Standard
Testing results for trip blanks analyzed during the testing program were all non-detect (ND).
Acetone and Carbon disulfide detected in TP6-N-B at low ppb levels considered an artifact of laboratory.

**Table 5**
**13 Priority Pollutant Metals Soil**
**Analytical Data**
**New Bedford Marine Commerce Terminal**
**New Bedford, Massachusetts**

| Sample Name | Collection Date | 13 Priority Pollutant Metals (mg/kg) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Antimony | Arsenic | Beryllium | Cadmium | Chromium | Copper | Lead | Mercury | Nickel | Selenium | Silver | Thallium | Zinc | TCLP lead (mg/l) |
| B-5/MW-3 | 5/4/2011 | 0.0900 | 4.11 | 0.298 | 0.079 | 6.48 | 13.0 | 77.2 | 0.061 | 5.25 | 0.434 | 0.094 | 0.104 | 37.3 | N/A |
| B-6/MW-4 | 5/5/2011 | 0.2840 | 1.25 | 0.166 | 0.071 | 7.72 | 14.0 | 95.2 | 0.027 | 5.36 | 0.318 | 0.033 | 0.056 | 55.7 | N/A |
| B-7 | 5/6/2011 | 0.035U | 0.68 | 0.196 | 0.047 | 6.60 | 6.8 | 15.2 | 0.012U | 4.61 | 0.203 | 0.035U | 0.078U | 19.0 | N/A |
| B-8/MW-5 | 5/6/2011 | 0.0400 | 1.32 | 0.270 | 0.409 | 6.19 | 10.1 | 161.0 | 0.028 | 4.07 | 0.334 | 0.039 | 0.086U | 126.0 | 0.6 |
| B-9/MW-6 | 5/9/2011 | 0.034U | 1.01 | 0.143 | 0.056 | 13.60 | 12.1 | 4.8 | 0.013U | 10.40 | 0.117 | 0.034U | 0.032U | 18.8 | N/A |
| B-11/MW-7 | 5/12/2011 | 0.037U | 1.00 | 0.194 | 0.040 | 6.04 | 3.4 | 3.3 | 0.014U | 3.38 | 0.279 | 0.037U | 0.082 | 10.1 | N/A |
| B-12/MW-8 (A) | 5/13/2011 | 0.1060 | 3.95 | 0.317 | 0.257 | 8.20 | 3.6 | 4.0 | 0.025U | 4.37 | 2.530 | 0.065U | 0.219 | 8.0 | N/A |
| B-12/MW-8 (B) | 5/13/2011 | 0.0560 | 1.78 | 0.251 | 0.037U | 9.02 | 2.9 | 4.6 | 0.013 | 4.99 | 0.481 | 0.038U | 0.045 | 13.0 | N/A |
| TP-1 | 4/25/2011 | 0.039U | 1.66 | 0.124 | 0.066 | 4.08 | 13.8 | 11.7 | 0.073 | 2.92 | 0.273 | 0.074 | 0.085 | 17.4 | NA |
| TP-2 | 4/25/2011 | 0.126 | 1.67 | 0.138 | 0.269 | 4.87 | 12.5 | 126 | 0.151 | 6.01 | 0.253 | 0.078 | 0.053 | 132 | 0.56 |
| TP-5 | 4/25/2011 | 0.472 | 6.37 | 0.202 | 0.570 | 5.80 | 21.9 | 580 | 0.134 | 5.95 | 0.549 | 0.149 | 0.127 | 200 | 18 |
| TP-4 | 4/25/2011 | 0.857 | 5.35 | 0.672 | 3.68 | 11.3 | 110 | 252 | 0.084 | 11.0 | 0.936 | 0.166 | 0.201 | 240 | 0.5U |
| TP-3 | 4/25/2011 | 0.037U | 1.20 | 0.230 | 0.034U | 8.92 | 6.04 | 4.41 | 0.013U | 5.84 | 0.249 | 0.038 | 0.037 | 15.9 | NA |
| TP-6 | 4/26/2011 | 0.195 | 5.10 | 0.232 | 0.186 | 3.96 | 44.0 | 74.5 | 0.050 | 7.29 | 0.800 | 0.087 | 0.206 | 27.8 | NA |
| TP-8 | 4/26/2011 | 0.033U | 0.484 | 0.061 | 0.031U | 2.04 | 3.55 | 1.96 | 0.014U | 1.34 | 0.129 | 0.033U | 0.031U | 4.39 | NA |
| TP-9 | 4/26/2011 | 0.354 | 5.53 | 0.236 | 0.218 | 6.45 | 71.8 | 30.2 | 0.021 | 5.79 | 2.44 | 0.120 | 0.138 | 78.8 | NA |
| TP-11 | 4/26/2011 | 0.162 | 0.641 | 0.090 | 0.072 | 2.90 | 5.03 | 16.2 | 0.012U | 2.08 | 0.248 | 0.033U | 0.039 | 12.8 | NA |
| TP-10 | 4/27/2011 | 0.164 | 1.57 | 0.221 | 0.101 | 8.12 | 17.6 | 60.4 | 0.022 | 3.29 | 0.574 | 0.081 | 0.047 | 31.0 | NA |
| TP-12 | 4/27/2011 | 0.186 | 7.46 | 0.451 | 0.237 | 5.92 | 37.7 | 164 | 0.290 | 7.92 | 1.42 | 0.122 | 0.297 | 85.5 | 0.5U |
| TP-14 | 4/27/2011 | 0.103 | 2.68 | 0.204 | 0.064 | 5.15 | 19.2 | 26.9 | 0.067 | 7.99 | 0.528 | 0.045 | 0.076 | 21.1 | NA |
| TP-16 | 4/27/2011 | 0.110 | 1.58 | 0.217 | 0.055 | 5.72 | 6.53 | 10.2 | 0.016 | 3.82 | 0.517 | 0.049 | 0.060 | 28.0 | NA |
| DUPLICATE-1 | 4/25/2011 | 0.032U | 1.04 | 0.211 | 0.046 | 8.3 | 6.40 | 7.63 | 0.013U | 5.5 | 0.256 | 0.032U | 0.047 | 17.8 | NA |
| DUPLICATE-2 | 4/26/2011 | 0.133 | 4.06 | 0.176 | 0.105 | 4.57 | 40.2 | 68.1 | 0.045 | 4.76 | 0.907 | 0.071 | 0.120 | 38.7 | N/A |
| MCP Upper Concentration Limit (UCL) | | 300 | 200 | 2000 | 300 | 2000 | NP | 3000 | 300 | 7000 | 8000 | 2000 | 800 | 10000 | NP |
| MCP S-3/GW-2 | | 30 | 20 | 200 | 30 | 200 | NP | 300 | 30 | 700 | 800 | 200 | 80 | 5000 | NP |
| MCP S-3/GW-3 | | 30 | 20 | 200 | 30 | 200 | NP | 300 | 30 | 700 | 800 | 200 | 80 | 5000 | NP |
| Reporting Category - RCS-2 | | 30 | 20 | 200 | 30 | 200 | 10000 | 300 | 30 | 700 | 800 | 200 | 60 | 3000 | NP |

**Notes:**
U = below quntitation limit
N/A = Not Analyzed
NP = Not Promulgated
Exceedance of MCP Reporting Category and/or Standard
A = Shallow Sample
M = Middle Sample
B = Bottom

**Table 6**
**Total Petroleum Hydrocarbons, MA VPH and MA EPH**
**Soil Analytical Data**
**New Bedford Marine Commerce Terminal**
**New Bedford, Massachusetts**

| Sample Name | Collection Date | Total Petroleum Hydrocarbons | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics | C5-C8 Aliphatics, Adjusted | C9-C12 Aliphatics, Adjusted | C9-C18 Aliphatics | C19-C36 Aliphatics | C11-C22 Aromatics | C11-C22 Aromatics, Adjusted | Naphthalene | 2-Methylnaphthalene | Acenaphthylene | Acenaphthene | Fluorene | Phenanthrene | Anthracene | Fluoranthene | Pyrene | Benzo(a)anthracene | Chrysene | Benzo(b)fluoranthene | Benzo(k)fluoranthene | Benzo(a)pyrene | Indeno(1,2,3-cd)Pyrene | Dibenzo(a,h)anthracene | Benzo(ghi)perylene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-5/MW-3 | 5/4/2011 | 510 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| B-6/MW-4 | 5/5/2011 | 208 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| B-7 | 5/6/2011 | 36.3U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| B-8/MW-5 | 5/6/2011 | 791 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| B-9/MW-6 | 5/9/2011 | 180 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| B-11/MW-7 | 5/12/2011 | 38.4U | 4.34U | 13 | 7 | 4.34U | 4.34U | 8.17U | 8.17U | 17 | 9 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| B-12/MW-8 (A) | 5/13/2011 | 562 | 14.4U | 66 | 31 | 14.4U | 19 | 14.4U | 16 | 127 | 81 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| B-12/MW-8 (B) | 5/13/2011 | 117 | 4.97U | 10 | 6 | 4.97U | 4.97U | 8.09U | 8.09U | 50 | 32 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| TP-1 | 4/25/2011 | 48.4 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| TP-2 | 4/25/2011 | 2180 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| TP-5 | 4/25/2011 | 253 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| TP-4 | 4/25/2011 | 524 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| TP-3 | 4/25/2011 | 449 | 21.8U | 85.4 | 55.2 | 21.8U | 30.2 | 37.9 | 15.4 | 244 | 195 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| TP-6 | 4/26/2011 | 5900 | 153U | 342 | 239 | 153U | 153U | 76.0 | 47.3U | 2490 | 1750 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| TP-8 | 4/26/2011 | 36.5U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| TP-9 | 4/26/2011 | 52.9U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| TP-11 | 4/26/2011 | 134 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| TP-10 | 4/27/2011 | 59.1 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| TP-12 | 4/27/2011 | 124 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| TP-14 | 4/27/2011 | 37.2U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| TP-16 | 4/27/2011 | 38.8U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| DUPLICATE 1 | 4/25/2011 | 650 | 34.8 | 205 | 67.9 | 29.4 | 103 | 86.5 | 28.6 | 630 | 493 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| DUPLICATE 2 | 4/26/2011 | 613 | 46.2U | 131 | 90.7 | 46.2U | 46.2U | 643 | 432U | 19300 | 12600 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| TP6-1-N-H | 7/18/2011 | NA | NA | NA | NA | NA | NA | 643U | 643U | 20600 | 17800 | 343 | 152 | 32.2U | 410 | 528 | 850 | 154 | 73.6 | 157 | 50.6 | 60.1 | 32.2U | 32.2U | 34.3 | 32.2U | 32.2U | 32.2U |
| TP6-2-N-M | 7/18/2011 | NA | NA | NA | NA | NA | NA | 1070 | 970 | 1100 | 1100 | 0.428U | 1.28 | 0.648 | 0.428U | 0.428U | 2.04 | 0.428U | 0.561 | 0.428U | 0.428U | 0.428U | 0.428U | 0.428U | 0.428U | 0.428U | 0.428U | 0.428U |
| TP6-3-N-A | 7/18/2011 | NA | NA | NA | NA | NA | NA | 7.54U | 7.54U | 30 | 22.2 | 0.377U | 0.377U | 0.377U | 0.377U | 0.377U | 1.2 | 0.377U | 1.2 | 1.31 | 0.535 | 0.829 | 0.544 | 0.5 | 0.576 | 0.432 | 0.377U | 0.669 |
| TP6-3-N-B | 7/18/2011 | NA | NA | NA | NA | NA | NA | 7.42U | 7.42U | 7.42U | 7.42U | 0.371U | 0.371U | 0.371U | 0.371U | 0.371U | 0.371U | 0.371U | 0.371U | 0.371U | 0.371U | 0.371U | 0.371U | 0.371U | 0.371U | 0.371U | 0.371U | 0.371U |
| TP6-2-W-A | 7/19/2011 | NA | NA | NA | NA | NA | NA | 36.9U | 54.8 | 322 | 253 | 1.85U | 1.85U | 1.85U | 1.85U | 1.85U | 3.11 | 1.85U | 10.6 | 13.5 | 7.26 | 8.3 | 5.68 | 4.62 | 7.38 | 4.15 | 1.85U | 4.81 |
| TP6-2-W-M | 7/19/2011 | NA | NA | NA | NA | NA | NA | 25.4U | 29.4 | 112 | 90.8 | 1.27U | 1.27U | 1.27U | 1.27U | 1.27U | 2.33 | 1.27U | 1.94 | 4.06 | 1.71 | 1.8 | 1.4 | 1.4 | 2.16 | 1.27U | 1.27U | 4.15 |
| TP6-2-W-B | 7/19/2011 | NA | NA | NA | NA | NA | NA | 7.18U | 7.18U | 56.1 | 38.9 | 0.359U | 0.411 | 0.359U | 1.13 | 0.757 | 4.57 | 1 | 1.54 | 2.99 | 0.908 | 0.867 | 0.515 | 0.468 | 0.978 | 0.424 | 0.359U | 0.644 |
| TP2-1-W-H | 7/19/2011 | NA | NA | NA | NA | NA | NA | 130 | 286 | 2840 | 1870 | 75.4 | 65.7 | 9.58 | 68.9 | 36.4 | 166 | 40.2 | 70.5 | 147 | 48.1 | 48.3 | 29.6 | 31.2 | 62.7 | 26.7 | 5.76U | 38.7 |
| TP2-1-W-M | 7/19/2011 | NA | NA | NA | NA | NA | NA | 84.6 | 44 | 837 | 558 | 35.1 | 29.6 | 2.35 | 15.6 | 10.9 | 49.8 | 11.8 | 18 | 37 | 10.3 | 10.6 | 7.18 | 8.06 | 13.8 | 7.29 | 2.25 | 9.78 |
| TP2-4-W-A | 7/19/2011 | NA | NA | NA | NA | NA | NA | 7.57U | 65.9 | 47.9 | 47 | 0.378U | 0.378U | 0.378U | 0.378U | 0.378U | 0.378U | 0.378U | 0.454 | 0.43 | 0.378U | 0.378U | 0.378U | 0.378U | 0.378U | 0.378U | 0.378U | 0.378U |
| TP2-4-W-B | 7/19/2011 | NA | NA | NA | NA | NA | NA | 7.8U | 12.4 | 88.9 | 66.3 | 0.39U | 0.39U | 0.39U | 0.39U | 0.39U | 1.79 | 0.39U | 3.09 | 3.85 | 1.79 | 2.17 | 1.79 | 1.5 | 2.21 | 1.75 | 0.39U | 2.65 |
| TP4-1-E | 7/19/2011 | NA | NA | NA | NA | NA | NA | 15.5 | 10.3 | 63.9 | 61.6 | 0.466 | 0.424U | 0.424U | 0.424U | 0.424U | 0.574 | 0.424U | 0.424U | 0.452 | 0.424U | 0.784 | 0.424U | 0.424U | 0.424U | 0.424U | 0.424U | 0.424U |
| TP3-1-S | 7/19/2011 | NA | NA | NA | NA | NA | NA | 9.24U | 9.24U | 42.5 | 25.8 | 0.462U | 0.462U | 0.462U | 0.462U | 0.462U | 2.42 | 0.462U | 3.17 | 3 | 1.27 | 1.52 | 1.23 | 1.02 | 1.3 | 0.914 | 0.462U | 0.907 |
| TP3-2-S-A | 7/19/2011 | NA | NA | NA | NA | NA | NA | 38.3U | 135 | 558 | 392 | 1.91U | 1.91U | 1.91U | 1.91U | 1.91U | 19.8 | 3.96 | 31 | 26.7 | 13 | 14.7 | 12.8 | 11.2 | 14.4 | 9.28 | 1.91U | 9.61 |

**Table 6**
**Total Petroleum Hydrocarbons, MA VPH and MA EPH**
**Soil Analytical Data**
**New Bedford Marine Commerce Terminal**
**New Bedford, Massachusetts**

| Sample Name | Collection Date | Total Petroleum Hydrocarbons | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics | C5-C8 Aliphatics, Adjusted | C9-C12 Aliphatics, Adjusted | C9-C18 Aliphatics | C19-C36 Aliphatics | C11-C22 Aromatics | C11-C22 Aromatics, Adjusted | Naphthalene | 2-Methylnaphthalene | Acenaphthylene | Acenaphthene | Fluorene | Phenanthrene | Anthracene | Fluoranthene | Pyrene | Benzo(a)anthracene | Chrysene | Benzo(b)fluoranthene | Benzo(k)fluoranthene | Benzo(a)pyrene | Indeno(1,2,3-cd)Pyrene | Dibenzo(a,h)anthracene | Benzo(ghi)perylene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TP3-2-S-M | 7/19/2011 | NA | NA | NA | NA | NA | NA | 6.83U | 7.8 | 34.8 | 25.5 | 0.341U | 0.341U | 0.341U | 0.341U | 0.341U | 0.981 | 0.341U | 1.93 | 1.71 | 0.833 | 0.902 | 0.583 | 0.341U | 0.921 | 0.681 | 0.341U | 0.751 |
| TP3-2-S-B | 7/19/2011 | NA | NA | NA | NA | NA | NA | 6.98U | 6.98U | 6.98U | 6.98U | 0.626 | 0.349U | 0.349U | 0.349U | 0.349U | 0.349U | 0.349U | 0.349U | 0.349U | 0.349U | 0.349U | 0.349U | 0.349U | 0.349U | 0.349U | 0.349U | 0.349U |
| TP4-1-S-A | 7/20/2011 | NA | NA | NA | NA | NA | NA | 7.32U | 7.32U | 34.9 | 24.2 | 0.366U | 0.366U | 0.366U | 0.366U | 0.366U | 0.775 | 0.366U | 1.5 | 1.86 | 0.886 | 1.07 | 0.912 | 0.781 | 1 | 0.726 | 0.366U | 1.16 |
| TP4-1-S-M | 7/20/2011 | NA | NA | NA | NA | NA | NA | 14.3U | 14.3U | 252 | 163 | 0.715U | 0.715U | 0.715U | 0.715U | 0.715U | 5.71 | 0.959 | 11.7 | 19.6 | 7.44 | 8.75 | 7.14 | 6.79 | 7.95 | 5.22 | 1.58 | 6.41 |
| TP4-1-S-B | 7/20/2011 | NA | NA | NA | NA | NA | NA | 7.22U | 7.22U | 7.43 | 7.43 | 0.361U | 0.361U | 0.361U | 0.361U | 0.361U | 0.361U | 0.361U | 0.361U | 0.361U | 0.361U | 0.361U | 0.361U | 0.361U | 0.361U | 0.361U | 0.361U | 0.361U |
| TP4-1-W-A | 7/20/2011 | NA | NA | NA | NA | NA | NA | 38U | 38U | 321 | 216 | 1.9U | 1.9U | 1.9U | 1.9U | 1.9U | 11.5 | 2.09 | 16.8 | 18.2 | 8.08 | 9.02 | 8.23 | 7.92 | 9.24 | 6.4 | 1.9U | 6.95 |
| TP4-1-W-M | 7/20/2011 | NA | NA | NA | NA | NA | NA | 20.6 | 25.4 | 310 | 217 | 1.84 | 0.997 | 1.16 | 0.751U | 0.751U | 5.2 | 1.15 | 9.21 | 17.5 | 7.03 | 8.67 | 7.15 | 7.38 | 10.2 | 6.21 | 1.95 | 7.96 |
| TP4-1-W-B | 7/20/2011 | NA | NA | NA | NA | NA | NA | 7.32U | 7.32U | 48.7 | 37.1 | 0.366U | 0.366U | 0.366U | 0.366U | 0.366U | 1.01 | 0.366U | 1.65 | 1.71 | 0.814 | 1.03 | 1.01 | 0.657 | 1.21 | 1.01 | 0.366U | 1.45 |
| TP4-2-W | 7/20/2011 | NA | NA | NA | NA | NA | NA | 12.6 | 18 | 175 | 147 | 0.386U | 0.386U | 1.09 | 0.386U | 0.386U | 0.721 | 0.386U | 2.41 | 2.74 | 1.26 | 2.21 | 2.46 | 1.81 | 3.07 | 3.92 | 0.705 | 6.32 |
| TP6-1-NW-A | 7/22/2011 | NA | NA | NA | NA | NA | NA | 6.58U | 6.58U | 9.53 | 7.64 | 0.329U | 0.329U | 0.329U | 0.329U | 0.329U | 0.329U | 0.329U | 0.463 | 0.589 | 0.329U | 0.337 | 0.329U | 0.329U | 0.493 | 0.329U | 0.329U | 0.329U |
| TP6-1-NW-M | 7/22/2011 | NA | NA | NA | NA | NA | NA | 7.29U | 7.29U | 7.29U | 7.29U | 0.365U | 0.365U | 0.365U | 0.365U | 0.365U | 0.365U | 0.365U | 0.365U | 0.365U | 0.365U | 0.365U | 0.365U | 0.365U | 0.365U | 0.365U | 0.365U | 0.365U |
| TP6-1-NW-B | 7/22/2011 | NA | NA | NA | NA | NA | NA | 18.3U | 36 | 46.1 | 44.7 | 1.4 | 0.916U | 0.916U | 0.916U | 0.916U | 0.916U | 0.916U | 0.916U | 0.916U | 0.916U | 0.916U | 0.916U | 0.916U | 0.916U | 0.916U | 0.916U | 0.916U |
| TP6-2-NW-A | 7/22/2011 | NA | NA | NA | NA | NA | NA | 7.09U | 10.5 | 15.3 | 12.8 | 0.354U | 0.354U | 0.354U | 0.354U | 0.354U | 0.354U | 0.354U | 0.633 | 0.607 | 0.354U | 0.375 | 0.354U | 0.354U | 0.884 | 0.354U | 0.354U | 0.354U |
| TP6-2-NW-M | 7/22/2011 | NA | NA | NA | NA | NA | NA | 7.38U | 7.38U | 7.38U | 7.38U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U |
| TP6-2-NW-B | 7/22/2011 | NA | NA | NA | NA | NA | NA | 7.37U | 7.37U | 9.1 | 9.1 | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U | 0.369U |
| TP6-A-NE-A | 7/22/2011 | NA | NA | NA | NA | NA | NA | 6.32U | 6.32U | 6.32U | 6.32U | 0.316U | 0.316U | 0.316U | 0.316U | 0.316U | 0.316U | 0.316U | 0.316U | 0.316U | 0.316U | 0.316U | 0.316U | 0.316U | 0.316U | 0.316U | 0.316U | 0.316U |
| TP6-1-NE-M | 7/22/2011 | NA | NA | NA | NA | NA | NA | 1230U | 1230U | 19700 | 12300 | 142 | 98.5 | 61.7U | 218 | 212 | 1620 | 311 | 1420 | 1340 | 484 | 490 | 257 | 290 | 318 | 149 | 61.7U | 118 |
| TP6-1-NE-B | 7/22/2011 | NA | NA | NA | NA | NA | NA | 6.26U | 6.26U | 94 | 59.8 | 0.313U | 0.313U | 0.313U | 0.574 | 0.528 | 5.02 | 0.932 | 5.74 | 5.84 | 2.48 | 3.11 | 2.07 | 2.32 | 2.47 | 1.44 | 0.407 | 1.23 |
| TP6-3-NW-A | 7/22/2011 | NA | NA | NA | NA | NA | NA | 6.47U | 6.47U | 6.47U | 6.47U | 0.324U | 0.324U | 0.324U | 0.324U | 0.324U | 0.324U | 0.324U | 0.324U | 0.324U | 0.324U | 0.324U | 0.324U | 0.324U | 0.324U | 0.324U | 0.324U | 0.324U |
| TP6-3-NE-M | 7/22/2011 | NA | NA | NA | NA | NA | NA | 33.5U | 33.5U | 375 | 210 | 1.89 | 1.68U | 1.68U | 3.9 | 4.26 | 29.4 | 7.32 | 32.8 | 25.9 | 11.8 | 11.8 | 8.55 | 7.91 | 9.67 | 5.53 | 1.68U | 4.46 |
| TP6-3-NE-B | 7/22/2011 | NA | NA | NA | NA | NA | NA | 6.94U | 6.94U | 10.2 | 6.94U | 0.347U | 0.347U | 0.347U | 0.347U | 0.347U | 0.545 | 0.347U | 0.865 | 0.72 | 0.375 | 0.393 | 0.347U | 0.347U | 0.364 | 0.347U | 0.347U | 0.347U |
| TP6-5-NE-A | 7/25/2011 | NA | NA | NA | NA | NA | NA | 6.44U | 6.44U | 6.44U | 6.44U | 0.322U | 0.322U | 0.322U | 0.322U | 0.322U | 0.322U | 0.322U | 0.322U | 0.322U | 0.322U | 0.322U | 0.322U | 0.322U | 0.322U | 0.322U | 0.322U | 0.322U |
| TP6-5-NE-M | 7/25/2011 | NA | NA | NA | NA | NA | NA | 14.4U | 14.4U | 205 | 107 | 0.722U | 0.722U | 0.722U | 2.05 | 2.39 | 17.4 | 4.19 | 19.3 | 14.8 | 6.92 | 7.29 | 5.44 | 4.8 | 5.84 | 3.73 | 0.758 | 3.02 |
| TP6-5-NE-B | 7/25/2011 | NA | NA | NA | NA | NA | NA | 9.18U | 69 | 40.9 | 38.5 | 0.459U | 0.459U | 0.459U | 0.459U | 0.459U | 0.459U | 0.459U | 0.682 | 0.808 | 0.459U | 0.467 | 0.459U | 0.459U | 0.469 | 0.459U | 0.459U | 0.459U |
| TP6-7-NW-A | 7/25/2011 | NA | NA | NA | NA | NA | NA | 286U | 472 | 1690 | 913 | 18.6 | 14.3U | 14.3U | 20.1 | 20.5 | 153 | 35.7 | 151 | 118 | 51.1 | 50.6 | 37.8 | 35.6 | 41 | 27.3 | 14.3U | 21.7 |
| TP6-7-NW-M | 7/25/2011 | NA | NA | NA | NA | NA | NA | 8.86U | 8.86U | 12.6 | 9.34 | 0.443U | 0.443U | 0.443U | 0.443U | 0.443U | 0.475 | 0.443U | 0.869 | 0.837 | 0.443U | 0.443U | 0.443U | 0.443U | 0.469 | 0.443U | 0.443U | 0.635 |
| TP6-7-NW-B | 7/25/2011 | NA | NA | NA | NA | NA | NA | 7.13U | 7.13U | 7.22 | 7.22 | 0.357U | 0.357U | 0.357U | 0.357U | 0.357U | 0.357U | 0.357U | 0.357U | 0.357U | 0.357U | 0.357U | 0.357U | 0.357U | 0.357U | 0.357U | 0.357U | 0.357U |
| TP6-1S | 8/11/2011 | NA | NA | NA | NA | NA | NA | 283U | 283U | 13300 | 10800 | 555 | 489 | 107 | 230 | 243 | 504 | 85.7 | 62.9 | 118 | 36.8 | 39.5 | 14.2U | 14.2U | 26.7 | 14.2U | 14.2U | 14.2U |
| TP6-3W | 8/11/2011 | NA | NA | NA | NA | NA | NA | 130U | 130U | 2930 | 2240 | 212 | 130 | 31.3 | 58.4 | 55.1 | 127 | 23.8 | 13.7 | 25.1 | 7.96 | 8.80 | 6.49U | 6.49U | 6.49U | 6.49U | 6.49U | 6.49U |
| TP6-8NW | 8/11/2011 | NA | NA | NA | NA | NA | NA | 7.99U | 7.99U | 7.99U | 7.99U | 0.399U | 0.399U | 0.399U | 0.399U | 0.399U | 0.399U | 0.399U | 0.399U | 0.399U | 0.399U | 0.399U | 0.399U | 0.399U | 0.399U | 0.399U | 0.399U | 0.399U |
| TP6-4N | 8/11/2011 | NA | NA | NA | NA | NA | NA | 8.07U | 8.07U | 152 | 96.4 | 0.404U | 0.404U | 0.404U | 0.799 | 0.893 | 7.25 | 1.85 | 11.6 | 8.87 | 4.7 | 4.84 | 3.38 | 2.75 | 3.99 | 2.65 | 0.404U | 2.09 |
| TP6-6NE | 8/11/2011 | NA | NA | NA | NA | NA | NA | 347U | 347U | 5240 | 2860 | 71.1 | 19.8 | 17.3U | 61.4 | 78.8 | 491 | 126 | 451 | 333 | 162 | 159 | 111 | 94 | 120 | 62.2 | 17.3U | 48.9 |
| TP2-1E | 8/11/2011 | NA | NA | NA | NA | NA | NA | 153 | 142U | 3710 | 2480 | 219 | 61.6 | 8.15 | 102 | 64.8 | 259 | 56.4 | 76.7 | 149 | 47 | 45.4 | 21.8 | 24.6 | 50.9 | 18.6 | 7.10U | 24.4 |
| TP2-2E | 8/11/2011 | NA | NA | NA | NA | NA | NA | 26.1 | 17.4U | 252 | 194 | 0.871U | 2.43 | 0.871U | 4.75 | 4.52 | 20.9 | 4.6 | 5.09 | 8.72 | 1.6 | 1.78 | 0.907 | 0.871U | 1.51 | 0.871U | 0.871U | 1.31 |
| TP4-1NE | 8/11/2011 | NA | NA | NA | NA | NA | NA | 8.05U | 8.05U | 32.4 | 25.8 | 0.403U | 0.403U | 0.403U | 0.403U | 0.403U | 1.12 | 0.403U | 1.5 | 1.57 | 0.65 | 0.709 | 0.483 | 0.403U | 0.544 | 0.403U | 0.403U | 0.403U |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MCP Upper Concentration Limit (UCL): | | 10000 | 5000 | 20000 | 5000 | 5000 | 20000 | 20000 | 20000 | 10000 | 10000 | 10000 | 5000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 3000 | 10000 | 3000 | 10000 | 300 | 3000 | 300 | 10000 |

**Table 6**
**Total Petroleum Hydrocarbons, MA VPH and MA EPH**
**Soil Analytical Data**
**New Bedford Marine Commerce Terminal**
**New Bedford, Massachusetts**

| Sample Name | Collection Date | Total Petroleum Hydrocarbons | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics | C5-C8 Aliphatics, Adjusted | C9-C12 Aliphatics, Adjusted | C9-C18 Aliphatics | C19-C36 Aliphatics | C11-C22 Aromatics | C11-C22 Aromatics, Adjusted | Naphthalene | 2-Methylnaphthalene | Acenaphthylene | Acenaphthene | Fluorene | Phenanthrene | Anthracene | Fluoranthene | Pyrene | Benzo(a)anthracene | Chrysene | Benzo(b)fluoranthene | Benzo(k)fluoranthene | Benzo(a)pyrene | Indeno(1,2,3-cd)Pyrene | Dibenzo(a,h)anthracene | Benzo(ghi)perylene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MCP S-3/GW-2 | | 5000 | 500 | 5000 | 500 | 500 | 5000 | 5000 | 5000 | 5000 | 5000 | 40 | 80 | 600 | 5000 | 5000 | 3000 | 5000 | 5000 | 5000 | 300 | 3000 | 300 | 3000 | 30 | 300 | 30 | 5000 |
| MCP S-3/GW-3 | | 5000 | 500 | 5000 | 500 | 500 | 5000 | 5000 | 5000 | 5000 | 5000 | 3000 | 500 | 10 | 5000 | 5000 | 3000 | 5000 | 5000 | 5000 | 300 | 3000 | 300 | 3000 | 30 | 300 | 30 | 5000 |
| Reporting Category - RCS-2 | | 3000 | 500 | 3000 | 500 | 500 | 3000 | 3000 | 5000 | 3000 | 3000 | 40 | 80 | 10 | 3000 | 3000 | 1000 | 3000 | 3000 | 3000 | 40 | 400 | 40 | 400 | 4 | 40 | 4 | 3000 |

**Notes:**
U = below quntitation limit
NA = Not Analyzed
Exceedance of MCP Reporting Category and/or Standard.
NP = Not Promulgated
A = Shallow Sample
M = Middle Sample
B = Bottom

# Table 7:
# Semi-Volatile Organics
# Soil Analytical Data
# New Bedford Marine Commerce Terminal, New Bedford, Massachusetts

| Sample Name | Collection Date | acenaphthene | fluoranthene | naphthalene | benzo(a)anthracene | benzo(a)pyrene | benzo(b)fluoranthene | benzo(k)fluoranthene | chrysene | acenaphthylene | anthracene | benzo(g,h,i)perylene | fluorene | phenanthrene | dibenz(a.h)anthracene | indeno(1,2,3-cd)pyrene | pyrene | 4-chloroaniline | dibenzofuran | 2-methylnaphthalene | 2,6-dichlorophenol | carbazole |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-5/MW-3 | 5/4/2011 | 0.96 | 8.9 | 0.56 | 4.6 | 4.0 | 5.3 | 1.9 | 4.4 | 0.36U | 1.8 | 2.5 | 0.72 | 7.9 | 0.72 | 2.7 | 7.4 | 0.36U | 0.66 | 0.36U | NA | NA |
| B-6/MW-4 | 5/5/2011 | 1.7U | 16 | 1.7U | 7.4 | 7.2 | 9.2 | 3.4 | 6.7 | 1.7U | 3.1 | 4.3 | 1.7U | 12 | 1 | 4.9 | 13 | 1.7U | 1.7U | 1.7U | NA | NA |
| B-7 | 5/6/2011 | 0.37U | 0.37U | 0.37U | 0.37U | 0.37U | 0.37U | 0.37U | 0.37U | 0.37U | 0.37U | 0.37U | 0.37U | 0.37U | 0.22U | 0.37U | 0.37U | 0.37U | 0.37U | 0.37U | NA | NA |
| B-8/MW-5 | 5/6/2011 | 1.7U | 37 | 1.7U | 18 | 18 | 22 | 8.9 | 15 | 3.6 | 6.5 | 12 | 1.7 | 21 | 2.4 | 13 | 31 | 1.7U | 1.7U | 1.7U | NA | NA |
| B-9/MW-6 | 5/9/2011 | 2U | 2.6 | 2U | 2U | 2U | 2U | 2U | 2U | 2U | 2U | 2U | 2U | 5.3 | 1.2U | 2U | 2U | 2U | 2U | 2U | NA | NA |
| B-11/MW-7 | 5/12/2011 | 0.66 | 0.41U | 6.6 | 0.41U | 0.41U | 0.41U | 0.41U | 0.41U | 0.41U | 0.41U | 0.41U | 0.41U | 0.41U | 0.24U | 0.41U | 0.41U | 0.41U | 0.41U | 2.1 | NA | NA |
| B-12/MW-8 (A) | 5/13/2011 | 2.6 | 3.4 | 18 | 1.4U | 1.4U | 1.4 | 1.4U | 1.4 | 1.4U | 1.4U | 1.4U | 1.4U | 5.3 | 0.84U | 1.4U | 3.3 | 1.4U | 1.4U | 3 | NA | NA |
| B-12/MW-8 (B) | 5/13/2011 | 0.6 | 2.1 | 1.8 | 0.88 | 0.78 | 0.97 | 0.4U | 0.96 | 0.4U | 0.51 | 0.43 | 0.43 | 2.9 | 0.24U | 0.43 | 2.1 | 0.4U | 0.4U | 0.4U | NA | NA |
| TP-1 | 4/25/2011 | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | 0.24U | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | NA | NA |
| TP-2 | 4/25/2011 | 2U | 38 | 2U | 19 | 18 | 21 | 9.2 | 17 | 2U | 6.7 | 11 | 2.2 | 26 | 2.5 | 12 | 33 | 2U | 2U | 2U | NA | NA |
| TP-3 | 4/25/2011 | 1.6 | 3 | 0.88 | 1.6 | 1.6 | 1.2 | 0.4 | 1.6 | 0.39U | 1.9 | 0.92 | 1.6 | 8.9 | 0.23U | 0.67 | 6 | 0.39U | 0.39U | 6.1 | NA | NA |
| TP-4 | 4/25/2011 | 2.2U | 5.2 | 2.2U | 3.2 | 3.5 | 4.2 | 3.2 | 2.2U | 2.2U | 2.2U | 2.6 | 2.2U | 2.7 | 2.2U | 2.3 | 6.3 | 2.2U | 2.2U | 2.2U | NA | NA |
| TP-5 | 4/25/2011 | 2U | 16 | 2U | 6.9 | 6.5 | 7.6 | 2.7 | 6.7 | 2U | 3.8 | 4.1 | 2U | 18 | 1.2U | 4 | 14 | 2U | 2U | 2U | NA | NA |
| TP-6 | 4/26/2011 | 110 | 4.9U | 500 | 60 | 64 | 44 | 14 | 54 | 4.9U | 83 | 35 | 76 | 390 | 7 | 25 | 150 | 4.9U | 4.9U | 300 | NA | NA |
| TP-8 | 4/26/2011 | 0.38U | 0.38U | 0.38U | 0.38U | 0.38U | 0.38U | 0.38U | 0.38U | 0.38U | 0.38U | 0.38U | 0.38U | 0.38U | 0.23U | 0.38U | 0.38U | 0.38U | 0.38U | 0.38U | NA | NA |
| TP-9 | 4/26/2011 | 0.58U | 1.1 | 0.58U | 0.58U | 0.58U | 0.58U | 0.58U | 0.58U | 0.58U | 0.58U | 0.58U | 0.58U | 0.58U | 0.35U | 0.58U | 0.58U | 0.58U | 0.58U | 0.58U | NA | NA |
| TP-10 | 4/27/2011 | 0.38U | 0.74 | 0.38U | 0.42 | 0.38U | 0.38U | 0.38U | 0.52 | 0.38U | 0.38U | 0.38U | 0.38U | 0.81 | 0.22U | 0.38U | 1 | 0.38U | 0.38U | 0.38U | NA | NA |
| TP-11 | 4/26/2011 | 0.38U | 0.38U | 0.38U | 0.5 | 0.53 | 0.61 | 0.38U | 0.49 | 0.38U | 0.38U | 0.4 | 0.38U | 0.38U | 0.23U | 0.38U | 1.1 | 0.38U | 0.38U | 0.38U | NA | NA |
| TP-12 | 4/27/2011 | 0.43U | 0.96 | 0.43U | 0.43 | 0.47 | 0.72 | 0.43U | 0.62 | 0.43U | 0.43U | 0.43U | 0.43U | 0.43U | 0.26U | 0..43 | 0.88 | 0.43U | 0.43U | 0.43U | NA | NA |
| TP-14 | 4/27/2011 | 0.37U | 0.72 | 0.37U | 0.37U | 0.37U | 0.37 | 0.37U | 0.37U | 0.37U | 0.37U | 0.37U | 0.37U | 0.43 | 0.22U | 0.37U | 0.7 | 0.37U | 0.37U | 0.37U | NA | NA |
| TP-16 | 4/27/2011 | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | 0.24U | 0.4U | 0.4U | 0.4U | 0.4U | 0.4U | NA | NA |
| DUPLICATE 1 | 4/25/2011 | 3.6 | 5.2 | 2 | 3.3 | 3.1 | 2.6 | 0.73 | 3 | 0.36U | 3.6 | 1.8 | 3.2 | 14 | 0.39 | 1.3 | 9.5 | 0.36U | 0.36U | 6.8 | NA | NA |
| DUPLICATE 2 | 4/25/2011 | 0.87 | 0.98 | 3.9 | 0.69 | 0.77 | 0.68 | 0.41U | 0.7 | 0.41 | 0.56 | 0.58 | 0.52 | 3.2 | 0.25U | 0.41U | 1.9 | 0.41U | 0.41U | 1.9 | NA | NA |
| TP2-1-W-H | 7/19/2011 | 110 | 150 | 410 | 120 | 140 | 58 | 72 | 120 | 24 | 60 | 100 | 54 | 290 | 23 | 92 | 320 | 3U | 3U | 150 | 120 | 3U |
| TP2-2-W-M | 7/19/2011 | 22 | 20 | 65 | 15 | 21 | 8.7 | 6.7 | 15 | 3.1 | 13 | 17 | 8.3 | 47 | 1U | 13 | 43 | 1U | 1U | 43 | 31 | 1U |
| TP2-4-W-A | 7/19/2011 | 0.06U | 0.6 | 0.06U | 0.3 | 0.3 | 0.2 | 0.3 | 0.4 | 0.06U | 0.06U | 0.3 | 0.06U | 0.3 | 0.06U | 0.2 | 0.6 | 0.06U | 0.06U | 0.06U | 0.06U | 0.06U |
| TP2-4-W-B | 7/19/2011 | 0.1 | 3 | 0.3 | 1.8 | 2 | 1.4 | 1.2 | 1.9 | 0.3 | 0.4 | 2.1 | 0.1 | 1.7 | 0.3 | 1.8 | 3.4 | 0.03U | 0.07 | 0.06 | 0.07 | 0.1 |
| TP3-1-S | 7/19/2011 | 0.07U | 0.3 | 0.07U | 0.2 | 0.1 | 0.07U | 0.09 | 0.2 | 0.07U | 0.07U | 0.07U | 0.07U | 0.1 | 0.07U | 0.07U | 0.3 | 0.07U | 0.07U | 0.07U | 0.07U | 0.07U |
| TP3-2-S-A | 7/19/2011 | 0.7 | 19 | 0.6 | 9.8 | 9.4 | 8.5 | 4.7 | 8.7 | 0.8 | 2.4 | 4.5 | 0.8 | 10 | 1.4 | 4.1 | 17 | 0.06U | 0.5 | 0.2 | 0.2 | 1 |
| TP3-2-S-B | 7/19/2011 | 0.03U | 0.03U | 0.7 | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.2 | 0.03U |
| TP3-2-S-M | 7/19/2011 | 0.1U | 1.2 | 0.1U | 0.5 | 0.6 | 0.4 | 0.5 | 0.6 | 0.1U | 0.1 | 0.5 | 0.1U | 0.6 | 0.2 | 0.4 | 1 | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U |
| TP4-1-E | 7/19/2011 | 1U | 1U | 2 | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 2.2 | 1U | 1U | 1U | 1U | 1U |
| TP4-1-S-A | 7/20/2011 | 0.08 | 1.8 | 0.09 | 1.1 | 1.2 | 0.9 | 0.8 | 1.1 | 0.1 | 0.2 | 0.7 | 0.1 | 1.1 | 0.2 | 0.7 | 1.8 | 0.04U | 0.04U | 0.04U | 0.04U | 0.1 |
| TP4-1-S-B | 7/20/2011 | 0.1U | 0.4 | 0.1U | 0.2 | 0.4 | 0.1U | 0.1U | 0.3 | 0.1U | 0.1U | 0.4 | 0.1U | 0.1U | 0.1U | 0.3 | 0.5 | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U |
| TP4-1-S-M | 7/20/2011 | 0.3 | 9 | 0.7 | 7 | 7.2 | 5.7 | 4.4 | 7.4 | 0.9 | 1.1 | 5.6 | 0.4 | 5.4 | 1.4 | 5.1 | 13 | 0.06U | 0.2 | 0.2 | 0.2 | 0.3 |
| TP4-1-W-A | 7/20/2011 | 2.7 | 26 | 1.3 | 14 | 10 | 6.5 | 9 | 8.8 | 0.7 | 5.9 | 4.5 | 2.5 | 23 | 1.6 | 4.2 | 22 | 0.06U | 1.9 | 0.6 | 0.6 | 3 |
| TP4-1-W-B | 7/20/2011 | 0.2U | 1 | 0.2U | 0.7 | 1.7 | 1 | 0.6 | 0.9 | 0.3 | 0.2U | 2.7 | 0.2U | 0.6 | 0.3 | 2.5 | 1.3 | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U |
| TP4-1-W-M | 7/20/2011 | 0.2 | 6.8 | 1.4 | 5.3 | 5.9 | 4.9 | 2.8 | 5.4 | 1 | 1.1 | 3.6 | 0.3 | 4.3 | 1.1 | 3.2 | 11 | 0.06U | 0.1 | 0.4 | 0.2 | 0.2 |
| TP4-2-W | 7/20/2011 | 0.2U | 1.9 | 0.2U | 1.7 | 4.7 | 2.6 | 1.3 | 2.1 | 1 | 0.5 | 9.2 | 0.2U | 1 | 0.9 | 7.8 | 3.9 | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U |
| TP6-1-NE-A | 7/22/2011 | 0.06U | 0.2 | 0.06U | 0.08 | 0.09 | 0.07 | 0.07 | 0.09 | 0.06U | 0.06U | 0.06 | 0.06U | 0.07 | 0.06U | 0.06U | 0.1 | 0.06U | 0.06U | 0.06U | 0.06U | 0.06U |
| TP6-1-NE-B | 7/22/2011 | 0.4 | 3.6 | 0.2 | 1.7 | 1.9 | 1 | 1.4 | 2 | 0.2U | 0.8 | 1.1 | 0.5 | 4.2 | 0.4 | 0.9 | 4 | 0.2U | 0.2U | 0.2 | 0.3 | 0.2U |
| TP6-1-NE-M | 7/22/2011 | 200 | 1800 | 130 | 910 | 720 | 670 | 380 | 850 | 33 | 390 | 420 | 230 | 1600 | 120 | 380 | 1700 | 7U | 110 | 83 | 73 | 150 |
| TP6-1-N-H | 7/18/2011 | 320 | 86 | 230 | 60 | 18 | 7.7 | 17 | 62 | 22 | 120 | 13 | 79 | 650 | 11 | 7.7 | 180 | 3U | 3U | 39 | 3U | 3U |
| TP6-1-NW-A | 7/22/2011 | 0.06U | 0.3 | 0.06U | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.06U | 0.06U | 0.2 | 0.06U | 0.1 | 0.07 | 0.1 | 0.3 | 0.06U | 0.06U | 0.06U | 0.06U | 0.06U |
| TP6-1-NW-B | 7/22/2011 | 0.2U | 0.2U | 0.4 | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 1.4 | 0.2U |
| TP6-1-NW-M | 7/22/2011 | 0.06U | 0.06U | 0.06U | 0.06U | 0.06U | 0.06U | 0.06U | 0.06U | 0.06U | 0.06U | 0.2 | 0.06U | 0.06U | 0.07 | 0.06U | 0.06U | 0.06U | 0.06U | 0.06U | 0.06U | 0.06U |
| TP6-2-N-M | 7/18/2011 | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U |
| TP6-2-N-M | 7/18/2011 | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U | 0.8U |
| TP6-2-NW-A | 7/22/2011 | 0.1U | 1.6 | 0.1U | 0.8 | 0.9 | 0.6 | 0.8 | 0.9 | 0.1U | 0.2 | 0.5 | 0.1U | 1.1 | 0.1U | 0.4 | 1.5 | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U |
| TP6-2-NW-A | 7/22/2011 | 0.1U | 1.6 | 0.1U | 0.8 | 0.9 | 0.6 | 0.8 | 0.9 | 0.1U | 0.2 | 0.5 | 0.1U | 1.1 | 0.1U | 0.4 | 1.5 | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U |
| TP6-2-NW-B | 7/22/2011 | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 1U | 1U |
| TP6-2-NW-M | 7/22/2011 | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U |
| TP6-2-W-A | 7/19/2011 | 0.06U | 2.5 | 0.06U | 2.8 | 5.1 | 2 | 2.9 | 3.2 | 0.3 | 0.2 | 4.4 | 0.06U | 0.4 | 0.8 | 4 | 6 | 0.06U | 0.06U | 0.06U | 0.06U | 0.06U |
| TP6-2-W-B | 7/19/2011 | 1.2 | 0.6U | 0.6U | 0.6U | 0.6U | 0.6U | 0.6U | 0.6U | 0.6U | 0.6U | 0.6U | 0.6U | 3.6 | 0.6U | 0.6U | 2.3 | 0.6U | 0.6U | 0.6U | 0.6U | 0.6U |
| TP6-2-W-M | 7/19/2011 | 6U | 6U | 6U | 6U | 6U | 6U | 6U | 13 | 6U | 16 | 6U | 6U | 6U | 6U | 6U | 6U | 6U | 6U | 6U | 6U | 6U |
| TP6-3-N-A | 7/18/2011 | 0.03U | 0.3 | 0.03U | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.03U | 0.03U | 0.2 | 0.03U | 0.2 | 0.03U | 0.2 | 0.3 | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U |
| TP6-3-N-B | 7/18/2011 | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U | 0.03U |
| TP6-3-NE-A | 7/22/2011 | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U |
| TP6-3-NE-B | 7/22/2011 | 12 | 140 | 5U | 52 | 59 | 40 | 42 | 53 | 5U | 37 | 26 | 16 | 100 | 5U | 30 | 100 | 5U | 9.5 | 5U | 5U | 5U |
| TP6-3-NE-M | 7/22/2011 | 0.06U | 0.4 | 0.06U | 0.2 | 0.2 | 0.1 | 0.1 | 0.2 | 0.06U | 0.06U | 0.06U | 0.06U | 0.3 | 0.06U | 0.06U | 0.3 | 0.06U | 0.06U | 0.06U | 0.06U | 0.06U |
| TP6-5-NE-A | 7/25/2011 | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U |
| TP6-5-NE-B | 7/25/2011 | 0.1U | 0.3 | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.4 | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U |

# Table 7:
# Semi-Volatile Organics
# Soil Analytical Data
# New Bedford Marine Commerce Terminal, New Bedford, Massachusetts

| Sample Name | Collection Date | acenaphthene | fluoranthene | naphthalene | benzo(a)anthracene | benzo(a)pyrene | benzo(b)fluoranthene | benzo(k)fluoranthene | chrysene | acenaphthylene | anthracene | benzo(g,h,i)perylene | fluorene | phenanthrene | dibenz(a.h)anthracene | indeno(1,2,3-cd)pyrene | pyrene | 4-chloroaniline | dibenzofuran | 2-methylnaphthalene | 2,6-dichlorophenol | carbazole |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TP6-5-NE-M | 7/25/2011 | 6.9 | 60 | 3U | 26 | 22 | 16 | 16 | 24 | 3U | 13 | 12 | 7.4 | 57 | 3U | 11 | 49 | 3U | 3U | 3U | 3U | 8.8 |
| TP6-7-NW-A | 7/25/2011 | 1.9 | 38 | 1.2 | 23 | 16 | 17 | 6.3 | 14 | 2 | 5.5 | 5.5 | 2.2 | 22 | 2 | 5.4 | 35 | 0.06U | 1 | 0.6 | 0.5 | 2.2 |
| TP6-7-NW-B | 7/25/2011 | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U | 0.1U |
| TP6-7-NW-M | 7/25/2011 | 0.4 | 3.3 | 0.2 | 1.5 | 1.4 | 1.1 | 1 | 1.7 | 0.07U | 0.6 | 0.7 | 0.3 | 3.6 | 0.2 | 0.6 | 3.2 | 0.07U | 0.07U | 0.1 | 0.2 | 0.3 |
| MCP Upper Concentration Limit (UCL): | | 10000 | 10000 | 10000 | 3000 | 300 | 3000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 300 | 3000 | 10000 | NP | NP | 5000 | NP | NP |
| MCP S-3/GW-2 | | 5000 | 5000 | 40 | 300 | 30 | 300 | 3000 | 3000 | 600 | 5000 | 5000 | 5000 | 3000 | 30 | 300 | 5000 | NP | NP | 80 | NP | NP |
| MCP S-3/GW-3 | | 5000 | 5000 | 3000 | 300 | 30 | 300 | 3000 | 3000 | 10 | 5000 | 5000 | 5000 | 3000 | 30 | 300 | 5000 | NP | NP | 500 | NP | NP |
| Reporting Category - RCS-2 | | 3000 | 3000 | 40 | 40 | 4 | 40 | 400 | 400 | 10 | 3000 | 3000 | 3000 | 1000 | 4 | 40 | 3000 | NP | NP | 80 | NP | NP |

**Notes:**
U = below quntitation limit
NA = Not Analyzed
- Exceedance of Reporting Category and/or Standard
NP = Not Promulgated
A = Shallow Sample
M = Middle Sample
B = Bottom

# Table 8
# PCBs (Aroclors) - Groundwater  Analytical Data
# New Bedford Marine Commerce Terminal
# New Bedford, Massachusetts

| | | Concentration of PCBs (µg/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sample Name | Collection Date | Aroclor 1016/1242 | Aroclor 1221 | Aroclor 1232 | Aroclor 1248 | Aroclor 1254 | Aroclor 1260 |
| MW-3 | 6/30/2011 | 0.05U | 0.05U | 0.05U | 0.05U | 0.05U | 0.05U |
| MW-4 | 6/30/2011 | 0.05U | 0.05U | 0.05U | 0.05U | 0.05U | 0.05U |
| MW-5 | 6/30/2011 | 0.05U | 0.05U | 0.05U | 0.05U | 0.05U | 0.05U |
| MW-6 | 6/29/2011 | 0.05U | 0.05U | 0.05U | 0.05U | 0.05U | 0.05U |
| MW-7 | 6/29/2011 | 0.05U | 0.05U | 0.05U | 0.05U | 0.05U | 0.05U |
| MW-8 | 6/28/2011 | 0.05U | 0.05U | 0.05U | 0.05U | 0.05U | 0.05U |
| MCP Upper Concentration Limits (UCL): | | NP | NP | NP | NP | NP | NP |
| MCP GW-3 | | NP | NP | NP | NP | NP | NP |
| Reporting Category - RCGW-2 | | NP | NP | NP | NP | NP | NP |

Notes:
U = Concentration is below the laboratory's method detection limit.
NP = Not Promulgated
ND = Analyzed Aroclors were non-detected.

# Table 9
# Total Petroleum Hydrocarbons Groundwater Analytical Data
# New Bedford Marine Commerce Terminal
# New Bedford, Massachusetts

| Total Petroleum Hydrocarbons, MA VPH and MA EPH (µg/L) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Sample Name | Collection Date | Total Petroleum Hydrocarbons | C9-C10 Aromatics | C5-C8 Aliphatics, Adjusted | C9-C12 Aliphatics, Adjusted | C9-C18 Aliphatics | C19-C36 Aliphatics | C11-C22 Aromatics, Adjusted |
| MW-3 | 6/30/2011 | 500U | NA | NA | NA | NA | NA | NA |
| MW-4 | 6/30/2011 | 500U | NA | NA | NA | NA | NA | NA |
| MW-5 | 6/30/2011 | 500U | NA | NA | NA | NA | NA | NA |
| MW-6 | 6/30/2011 | 3350 | NA | NA | NA | NA | NA | NA |
| MW-7 | 6/29/2011 | 500U | 3730 | 1250U | 2370 | 100U | 100U | 2710 |
| MW-8 | 6/28/2011 | 500U | 50U | 50U | 50U | 100U | 100U | 148 |
| MCP Upper Concentration Limit (UCL): | | 50000 | 100000 | 100000 | 100000 | 100000 | 100000 | 100000 |
| MCP Method 1 GW-3 | | 5000 | 50000 | 50000 | 50000 | 50000 | 50000 | 5000 |
| Reporting Category - RCGW-2 | | 5000 | 7000 | 3000 | 5000 | 5000 | 50000 | 5000 |

U = Concentration is below the laboratory's method detection limit.

Notes:

U = below quntitation limit

NA = Not Analyzed

NP = Not Promulgated

# Table 10
# Semi-Volatile Organics Groundwater Analytical Data
# New Bedford Marine Commerce Terminal
# New Bedford, Massachusetts

| | | **Volatile Organics** (µg/L) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Sample Name | Collection Date | Benzene | Toluene | Ethylbenzene | p/m-Xylene | o-Xylene | Naphthalene | 1,3,5-Trimethylbenzene |
| MW-3 | 6/30/2011 | 0.5U | 1U | 1U | 2U | 1U | 2U | 2U |
| MW-4 | 6/30/2011 | 0.5U | 1U | 1U | 2U | 1U | 2U | 2U |
| MW-5 | 6/30/2011 | 0.5U | 1U | 1U | 2U | 1U | 2U | 2U |
| MW-6 | 6/29/2011 | 0.5U | 1U | 1U | 2U | 1U | 2U | 2U |
| MW-7 | 6/29/2011 | 370 | 110 | 940 | 560 | 280 | 3900 | 300 |
| MW-8 | 6/28/2011 | 0.5U | 1U | 1U | 2U | 1U | 42 | 2U |
| MCP Upper Concentration Limit (UCL): | | 100000 | 100000 | 100000 | 100000 | | 100000 | NP |
| MCP Method 1 GW-3 | | 10000 | 40000 | 5000 | 5000 | | 20000 | NP |
| Reporting Category - RCGW-2 | | 2000 | 40000 | 5000 | 5000 | | 1000 | 1000 |

Notes:
U = Concentration is below the laboratory's method detection limit.
NP = Not Promulgated
Constituent concentration exceeds MCP Reportable Concentration.

# Table 11
# Semi-Volatile Organics Groundwater Analytical Data
# New Bedford Marine Commerce Terminal
# New Bedford, Massachusetts

| | | Semivolatile Organics (µg/L) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Sample Name | Collection Dat | acenaphthene | fluoranthene | naphthalene | fluorene | phenanthrene | pyrene | 2-methylnaphthalene |
| MW-3 | 6/30/2011 | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U |
| MW-4 | 6/30/2011 | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U |
| MW-5 | 6/30/2011 | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U |
| MW-6 | 6/29/2011 | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U | 0.2U |
| MW-7 | 6/29/2011 | 68 | 10U | 700 | 20 | 19 | 10U | 150 |
| MW-8 | 6/28/2011 | 2.1 | 3.8 | 0.2U | 0.28 | 0.28 | 3.2 | 0.2U |
| MCP Upper Concentration Limit (UCL): | | 60000 | 2000 | 100000 | 400 | 100000 | 800 | 100000 |
| MCP Method 1 GW-3 | | 6000 | 200 | 20000 | 40 | 10000 | 20 | 20000 |
| Reporting Category - RCGW-2 | | 6000 | 200 | 1000 | 40 | 10000 | 20 | 2000 |

Notes:
U = Concentration is below the labora U = Concentration is below the laboratory's method detection limit.
NP = Not Promulgated
Note: Other analyzed compounds not detected.

# Table 12
# 13 Priority Pollutant Metals Groundwater Analytical Data
# New Bedford Marine Commerce Terminal
# New Bedford, Massachusetts

| | | 13 Priority Pollutant Metals (mg/L) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Name | Collection Date | Antimony | Arsenic | Beryllium | Cadmium | Chromium | Copper | Lead | Mercury | Nickel | Selenium | Silver | Thallium | Zinc |
| MW-3 | 6/30/2011 | 0.0036 | 0.0006 | 0.0005U | 0.0005U | 0.0005U | 0.0018 | 0.0005U | 0.0002U | 0.0008 | 0.001 | 0.0005U | 0.0005U | 0.0118 |
| MW-4 | 6/30/2011 | 0.01U | 0.0055 | 0.005U | 0.005U | 0.005U | 0.0124 | 0.005U | 0.0002U | 0.0064 | 0.024 | 0.005U | 0.005U | 0.005U |
| MW-5 | 6/30/2011 | 0.001U | 0.0005U | 0.0005U | 0.0005U | 0.0005U | 0.0024 | 0.0005U | 0.0002U | 0.0021 | 0.002 | 0.0005U | 0.0005U | 0.0116 |
| MW-6 | 6/29/2011 | 0.001U | 0.0046 | 0.0005U | 0.0005U | 0.0005U | 0.0009 | 0.0005U | 0.0002U | 0.0021 | 0.002 | 0.0005U | 0.0005U | 0.0130 |
| MW-7 | 6/29/2011 | 0.001U | 0.0013 | 0.0005U | 0.0005U | 0.0005U | 0.0008 | 0.0005U | 0.0002U | 0.0011 | 0.001 | 0.0005U | 0.0005U | 0.0127 |
| MW-8 | 6/28/2011 | 0.001U | 0.0008 | 0.0005U | 0.0005U | 0.0008 | 0.0005U | 0.0005U | 0.0002U | 0.0008 | 0.001 | 0.0005U | 0.0005U | 0.0090 |
| MCP Upper Concentration Limit (UCL) | | 80 | 9 | 2 | 0.05 | 3 | NP | 0.15 | 0.2 | 2 | 1 | 1 | 30 | 50 |
| MCP Method 1 GW-3 | | 8 | 0.9 | 0.2 | 0.004 | 0.3 | NP | 0.01 | 0.02 | 0.2 | 0.1 | 0.007 | 3 | 0.9 |
| Reporting Category - RCGW-2 | | 8 | 0.9 | 0.2 | 0.004 | 0.3 | 100 | 0.01 | 0.02 | 0.2 | 0.1 | 0.007 | 3 | 0.9 |

Notes:
U = below laboratory's method detection limit
N/A = Not Analyzed
NP = Not Promulgated

**TABLE 13**
**SOIL HANDLING AND DISPOSAL ESTIMATE**
**South Terminal CDF, New Bedford, Massachusetts**

| TEST PIT/EXCAVATION AREA | MAIN CONTAMINANT | AREA (SF) | EXCAVATION THICKNESS (ft) | VOLUME (CY) | TONS | DISPOSAL PER TON | MA TRANSPORT FEE | TOTAL DISPOSAL COST PER TON | DISPOSAL COST PER AREA | EXCAVATION COST PER TON | EXCAVATION COST | HANDLING & DISPOSAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TP-4 | PCBs | 4,000 | 4 | 593 | 948 | $258.8 | $63.9 | $322.7 | $305,958 | $13.3 | $12,610 | $318,568 |
| TP-2 | PCBs | 3,100 | 4 | 459 | 735 | $258.8 | $63.9 | $322.7 | $237,117 | $13.3 | $9,773 | $246,890 |
| ***PCBs - Estimated Cost Range*** | | | | | | | | | | | | ***$565,459*** |
| TP-6 | Petroleum | 4,500 | 3 | 500 | 800 | $77.6 | NA | $78 | $62,080 | $13.3 | $10,640 | $72,720 |
| ***Petroleum-Related Estimated Cost*** | | | | | | | | | | | | ***$72,720*** |
| ***Total Estimated Costs - PCBs & Petroleum Related*** | | | | | | | | | | | | ***$638,179*** |

Notes:

***PCB Soils: Includes 15% markup.***

1. $225.00 / ton Transportation and Disposal plus Massachusetts Transport Fee of $55.60. Transport Fee is cost to transfer soils from Site to railcars for transport to disposal facility.
2. Soils are proposed for a Subtitle C landfill and EPA must approve the facility under the "Mega Rule" (approval is not an issue but must be stated in soil management plan to EPA).
3. Assumptions:

(a) Disposal at Heritage Environmental's Subtitle C landfill in Indiana
(b) <10% debris and should not contain debris larger than 3 ft x 1 ft x 1 ft.
(c) Facility can accept larger debris but special arrangements will need to be made prior to shipping.
(d) Waste must pass paint filter as received at the landfill.
(e) Waste must be the minimum of 1000 lbs / sq ft shear strength or 2000 lbs / sq ft unconfined compressive strength.
(f) Samples, profile and EPA approval letter required

***Petroleum Soils: Includes 15% markup.***

1. $67.50 / ton Transportation and Disposal. (Massachusetts Transport Fee does not apply)
2. Soils are proposed for asphalt batch in Massachusetts.
3. Assumptions

(a) Disposal at Aggregate Industries in Stoughton MA.
(b) <15% debris and cannot contain large quantities of clay.
(c) Waste must pass paint filter test.
(d) Data, profile, site map and LSP opinion Letter required.

***REGULATORY COSTS***

| | |
|---|---|
| Preparation (field and office) | $7,500.00 |
| RAM Related | $10,000.00 |
| TSCA Related | $20,000.00 |
| LSP Services (disposal) | $5,000.00 |
| Verification Sampling | $12,500.00 |
| Apex Oversight/Documentation & Equipment | $17,250.00 |
| Closure Reports (RAM/TSCA) | $20,000.00 |
| Response Action Outcome | $30,000.00 |
| includes M3 Risk Characterization | |
| Deed Restrictions** | $20,500.00 |
| Project Mgt (10%) | $13,775.00 |
| ***Estimated Regulatory Costs*** | ***$156,525.00*** |
| ***Estimated Cleanup Costs (Total)*** | ***$794,704*** |

**Survey (metes & Bounds added to cost)

**NEW BEDFORD RADIO (HALL COMM)**

**RTN: 4-25350**

| Accutest Labs of New England, Inc. | | | | | | | 1/31/2014 8:39 |
|---|---|---|---|---|---|---|---|
| **Job Number:** | MC27613 | | | | | | |
| **Account:** | Apex Companies, LLC | | | | | | |
| **Project:** | NBMCT, Blackmer, New Bedford, MA | | | | | | |
| **Project Number:** | 6690.027 | | | | | | |
| | | | | | | Legend: | Hit |

| Client Sample ID: | | A-2013-B-1/MW-1 0-2' | A-2013-B-1/MW-1 4-6' | A-2013-B-2/MW-2 0-2' | A-2013-B-2/MW-2 4-6' | A-2013-B-3/MW-3 4-6' | A-2013-B-4/MW-4 0-2' |
|---|---|---|---|---|---|---|---|
| **Lab Sample ID:** | | MC27613-1 | MC27613-2 | MC27613-3 | MC27613-4 | MC27613-5 | MC27613-6 |
| **Date Sampled:** | | 1/9/2014 | 1/10/2014 | 1/9/2014 | 1/9/2014 | 1/10/2014 | 1/10/2014 |
| **Matrix:** | | Soil | Soil | Soil | Soil | Soil | Soil |
| **GC/MS Semi-volatiles (SW846 8270D)** | | | | | | | |
| Benzoic acid | mg/kg | 0.56 U | 0.60 U | 0.59 U | 0.56 U | 0.65 U | 2.9 U |
| 2-Chlorophenol | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| 4-Chloro-3-methyl phenol | mg/kg | 0.56 U | 0.60 U | 0.59 U | 0.56 U | 0.65 U | 2.9 U |
| 2,4-Dichlorophenol | mg/kg | 0.56 U | 0.60 U | 0.59 U | 0.56 U | 0.65 U | 2.9 U |
| 2,4-Dimethylphenol | mg/kg | 0.56 U | 0.60 U | 0.59 U | 0.56 U | 0.65 U | 2.9 U |
| 2,4-Dinitrophenol | mg/kg | 1.1 U | 1.2 U | 1.2 U | 1.1 U | 1.3 U | 5.8 U |
| 2-Methylphenol | mg/kg | 0.56 U | 0.60 U | 0.59 U | 0.56 U | 0.65 U | 2.9 U |
| 3&4-Methylphenol | mg/kg | 0.56 U | 0.60 U | 0.59 U | 0.56 U | 0.65 U | 2.9 U |
| 2-Nitrophenol | mg/kg | 0.56 U | 0.60 U | 0.59 U | 0.56 U | 0.65 U | 2.9 U |
| 4-Nitrophenol | mg/kg | 1.1 U | 1.2 U | 1.2 U | 1.1 U | 1.3 U | 5.8 U |
| Pentachlorophenol | mg/kg | 0.56 U | 0.60 U | 0.59 U | 0.56 U | 0.65 U | 2.9 U |
| Phenol | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| 2,4,5-Trichlorophenol | mg/kg | 0.56 U | 0.60 U | 0.59 U | 0.56 U | 0.65 U | 2.9 U |
| 2,4,6-Trichlorophenol | mg/kg | 0.56 U | 0.60 U | 0.59 U | 0.56 U | 0.65 U | 2.9 U |
| Acenaphthene | mg/kg | 0.11 U | 0.12 U | 0.12 U | 0.11 U | 0.13 U | 0.892 |
| Acenaphthylene | mg/kg | 0.11 U | 0.12 U | 0.12 U | 0.11 U | 0.13 U | 0.58 U |
| Acetophenone | mg/kg | 0.56 U | 0.60 U | 0.59 U | 0.56 U | 0.65 U | 2.9 U |
| Aniline | mg/kg | 0.56 U | 0.60 U | 0.59 U | 0.56 U | 0.65 U | 2.9 U |
| Anthracene | mg/kg | 0.165 | 0.12 U | 0.328 | 0.11 U | 0.284 | 2.61 |
| Benzo(a)anthracene | mg/kg | 0.472 | 0.12 U | 1.46 | 0.11 U | 0.881 | 6.03 |
| Benzo(a)pyrene | mg/kg | 0.354 | 0.12 U | 1.34 | 0.11 U | 0.795 | 4.78 |
| Benzo(b)fluoranthene | mg/kg | 0.375 | 0.12 U | 1.52 | 0.11 U | 0.693 | 4.2 |
| Benzo(g,h,i)perylene | mg/kg | 0.2 | 0.12 U | 0.86 | 0.11 U | 0.444 | 2.55 |
| Benzo(k)fluoranthene | mg/kg | 0.369 | 0.12 U | 0.941 | 0.11 U | 0.577 | 3.93 |
| 4-Bromophenyl phenyl ether | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| Butyl benzyl phthalate | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| 2-Chloronaphthalene | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| 4-Chloroaniline | mg/kg | 0.56 U | 0.60 U | 0.59 U | 0.56 U | 0.65 U | 2.9 U |
| Chrysene | mg/kg | 0.497 | 0.12 U | 1.51 | 0.11 U | 0.828 | 6.08 |
| bis(2-Chloroethoxy)methane | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| bis(2-Chloroethyl)ether | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| bis(2-Chloroisopropyl)ether | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| 1,2-Dichlorobenzene | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| 1,2-Diphenylhydrazine | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| 1,3-Dichlorobenzene | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| 1,4-Dichlorobenzene | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| 2,4-Dinitrotoluene | mg/kg | 0.56 U | 0.60 U | 0.59 U | 0.56 U | 0.65 U | 2.9 U |
| 2,6-Dinitrotoluene | mg/kg | 0.56 U | 0.60 U | 0.59 U | 0.56 U | 0.65 U | 2.9 U |
| 3,3'-Dichlorobenzidine | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| Dibenzo(a,h)anthracene | mg/kg | 0.11 U | 0.12 U | 0.257 | 0.11 U | 0.13 U | 1.06 |
| Dibenzofuran | mg/kg | 0.11 U | 0.12 U | 0.12 U | 0.11 U | 0.13 U | 0.787 |
| Di-n-butyl phthalate | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| Di-n-octyl phthalate | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| Diethyl phthalate | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| Dimethyl phthalate | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| bis(2-Ethylhexyl)phthalate | mg/kg | 0.28 U | 0.359 | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| Fluoranthene | mg/kg | 1.06 | 0.12 U | 2.94 | 0.11 U | 2.13 | 12.8 |
| Fluorene | mg/kg | 0.11 U | 0.12 U | 0.12 U | 0.11 U | 0.13 U | 1.14 |
| Hexachlorobenzene | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| Hexachlorobutadiene | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| Hexachlorocyclopentadiene | mg/kg | 0.56 U | 0.60 U | 0.59 U | 0.56 U | 0.65 U | 2.9 U |
| Hexachloroethane | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.206 | 0.12 U | 0.816 | 0.11 U | 0.445 | 2.32 |
| Isophorone | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| 2-Methylnaphthalene | mg/kg | 0.11 U | 0.12 U | 0.12 U | 0.11 U | 0.13 U | 0.58 U |
| Naphthalene | mg/kg | 0.118 | 0.12 U | 0.12 U | 0.11 U | 0.13 U | 0.803 |
| Nitrobenzene | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| N-Nitroso-di-n-propylamine | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| N-Nitrosodiphenylamine | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| Phenanthrene | mg/kg | 0.851 | 0.12 U | 1.4 | 0.11 U | 1.22 | 11.9 |
| Pyrene | mg/kg | 1.02 | 0.12 U | 2.88 | 0.11 U | 2.12 | 11.4 |
| 1,2,4-Trichlorobenzene | mg/kg | 0.28 U | 0.30 U | 0.30 U | 0.28 U | 0.32 U | 1.4 U |
| **GC Volatiles (SW846 8015)** | | | | | | | |
| TPH-GRO (VOA) | mg/kg | 6.3 U | 7.1 U | 6.6 U | 4.9 U | 8.2 U | 6.8 U |
| **GC Semi-volatiles (SW846 8082)** | | | | | | | |
| Aroclor 1016 | mg/kg | 0.038 U | 0.041 U | 0.038 U | 0.037 U | 0.043 U | 0.039 U |
| Aroclor 1221 | mg/kg | 0.038 U | 0.041 U | 0.038 U | 0.037 U | 0.043 U | 0.039 U |
| Aroclor 1232 | mg/kg | 0.038 U | 0.041 U | 0.038 U | 0.037 U | 0.043 U | 0.039 U |
| Aroclor 1242 | mg/kg | 0.038 U | 0.041 U | 0.038 U | 0.037 U | 0.043 U | 0.039 U |
| Aroclor 1248 | mg/kg | 0.038 U | 0.041 U | 0.038 U | 0.037 U | 0.043 U | 0.039 U |
| Aroclor 1254 | mg/kg | 3.87 | 0.888 | 0.196 | 0.037 U | 0.043 U | 4.74 |
| Aroclor 1260 | mg/kg | 0.038 U | 0.041 U | 0.038 U | 0.037 U | 0.043 U | 0.039 U |
| **GC Semi-volatiles (SW846-8015)** | | | | | | | |
| TPH-DRO (Semi-VOA) | mg/kg | 26.3 | 20 U | 46.8 | 19 U | 52.4 | 309 |
| **Metals Analysis** | | | | | | | |
| Antimony | mg/kg | 0.90 U | 0.98 U | 0.95 U | 0.89 U | 0.78 U | 0.98 U |
| Arsenic | mg/kg | 3 | 5.2 | 3.8 | 2 | 4.3 | 2.7 |
| Beryllium | mg/kg | 0.36 U | 0.39 U | 0.4 | 0.36 U | 0.31 U | 0.39 U |
| Cadmium | mg/kg | 0.36 U | 0.39 U | 0.38 U | 0.36 U | 0.31 U | 0.39 U |
| Chromium | mg/kg | 8 | 6.4 | 9.4 | 17.9 | 5 | 15.1 |
| Copper | mg/kg | 17.8 | 14.7 | 20.1 | 10.9 | 21 | 19.3 |
| Lead | mg/kg | 88.2 | 25.2 | 105 | 10.5 | 113 | 137 |
| TCLP Lead | mg/L | NA | NA | 0.059 | 0.013 | 0.13 | NA |
| Mercury | mg/kg | 0.037 | 0.040 U | 0.067 | 0.038 U | 0.036 | 0.11 |
| Nickel | mg/kg | 7.6 | 9 | 6.7 | 9.2 | 4.8 | 7.1 |
| Selenium | mg/kg | 0.90 U | 3.2 | 0.95 U | 0.89 U | 0.78 U | 0.98 U |
| Silver | mg/kg | 0.45 U | 0.49 U | 0.48 U | 0.44 U | 0.39 U | 0.49 U |
| Thallium | mg/kg | 0.90 U | 0.98 U | 0.95 U | 0.89 U | 0.78 U | 0.98 U |
| Zinc | mg/kg | 49.3 | 33.7 | 62.8 | 31.5 | 43.4 | 61.5 |
| **General Chemistry** | | | | | | | |
| Solids, Percent | % | 88.4 | 81.1 | 84 | 86 | 74.8 | 83.9 |

| Client Sample ID: | | A-2013-B-5/MW-5 0-2' | A-2013-B-5/MW-5 4-6' | A-2013-B-6 0-2' | A-2013-B-6 4-6' | A-2013-TP-1 0-2' | A-2013-TP-1 4-6' |
|---|---|---|---|---|---|---|---|
| Lab Sample ID: | | MC27613-7 | MC27613-8 | MC27613-9 | MC27613-10 | MC27613-11 | MC27613-12 |
| Date Sampled: | | 1/9/2014 | 1/9/2014 | 1/9/2014 | 1/9/2014 | 1/10/2014 | 1/10/2014 |
| Matrix: | | Soil | Soil | Soil | Soil | Soil | Soil |
| **GC/MS Semi-volatiles (SW846 8270D)** | | | | | | | |
| Benzoic acid | mg/kg | 3.0 U | 0.57 U | 2.8 U | 0.53 U | 0.55 U | 0.60 U |
| 2-Chlorophenol | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| 4-Chloro-3-methyl phenol | mg/kg | 3.0 U | 0.57 U | 2.8 U | 0.53 U | 0.55 U | 0.60 U |
| 2,4-Dichlorophenol | mg/kg | 3.0 U | 0.57 U | 2.8 U | 0.53 U | 0.55 U | 0.60 U |
| 2,4-Dimethylphenol | mg/kg | 3.0 U | 0.57 U | 2.8 U | 0.53 U | 0.55 U | 0.60 U |
| 2,4-Dinitrophenol | mg/kg | 6.0 U | 1.1 U | 5.5 U | 1.1 U | 1.1 U | 1.2 U |
| 2-Methylphenol | mg/kg | 3.0 U | 0.57 U | 2.8 U | 0.53 U | 0.55 U | 0.60 U |
| 3&4-Methylphenol | mg/kg | 3.0 U | 0.57 U | 2.8 U | 0.53 U | 0.55 U | 0.60 U |
| 2-Nitrophenol | mg/kg | 3.0 U | 0.57 U | 2.8 U | 0.53 U | 0.55 U | 0.60 U |
| 4-Nitrophenol | mg/kg | 6.0 U | 1.1 U | 5.5 U | 1.1 U | 1.1 U | 1.2 U |
| Pentachlorophenol | mg/kg | 3.0 U | 0.57 U | 2.8 U | 0.53 U | 0.55 U | 0.60 U |
| Phenol | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| 2,4,5-Trichlorophenol | mg/kg | 3.0 U | 0.57 U | 2.8 U | 0.53 U | 0.55 U | 0.60 U |
| 2,4,6-Trichlorophenol | mg/kg | 3.0 U | 0.57 U | 2.8 U | 0.53 U | 0.55 U | 0.60 U |
| Acenaphthene | mg/kg | 2.7 | 0.11 U | 0.55 U | 0.11 U | 0.11 U | 0.12 U |
| Acenaphthylene | mg/kg | 0.818 | 0.11 U | 0.55 U | 0.11 U | 0.11 U | 0.12 U |
| Acetophenone | mg/kg | 3.0 U | 0.57 U | 2.8 U | 0.53 U | 0.55 U | 0.60 U |
| Aniline | mg/kg | 3.0 U | 0.57 U | 2.8 U | 0.53 U | 0.55 U | 0.60 U |
| Anthracene | mg/kg | 5.64 | 0.11 U | 0.802 | 0.11 U | 0.11 U | 0.12 U |
| Benzo(a)anthracene | mg/kg | 15.7 | 0.11 U | 2.74 | 0.11 U | 0.11 U | 0.12 U |
| Benzo(a)pyrene | mg/kg | 14 | 0.11 U | 2.65 | 0.11 U | 0.11 U | 0.12 U |
| Benzo(b)fluoranthene | mg/kg | 11.7 | 0.11 U | 2.36 | 0.11 U | 0.11 U | 0.12 U |
| Benzo(g,h,i)perylene | mg/kg | 7.52 | 0.11 U | 1.55 | 0.11 U | 0.11 U | 0.12 U |
| Benzo(k)fluoranthene | mg/kg | 11.4 | 0.11 U | 1.94 | 0.11 U | 0.11 U | 0.12 U |
| 4-Bromophenyl phenyl ether | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| Butyl benzyl phthalate | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| 2-Chloronaphthalene | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| 4-Chloroaniline | mg/kg | 3.0 U | 0.57 U | 2.8 U | 0.53 U | 0.55 U | 0.60 U |
| Chrysene | mg/kg | 15.8 | 0.11 U | 2.83 | 0.11 U | 0.11 U | 0.12 U |
| bis(2-Chloroethoxy)methane | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| bis(2-Chloroethyl)ether | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| bis(2-Chloroisopropyl)ether | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| 1,2-Dichlorobenzene | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| 1,2-Diphenylhydrazine | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| 1,3-Dichlorobenzene | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| 1,4-Dichlorobenzene | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| 2,4-Dinitrotoluene | mg/kg | 3.0 U | 0.57 U | 2.8 U | 0.53 U | 0.55 U | 0.60 U |
| 2,6-Dinitrotoluene | mg/kg | 3.0 U | 0.57 U | 2.8 U | 0.53 U | 0.55 U | 0.60 U |
| 3,3'-Dichlorobenzidine | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| Dibenzo(a,h)anthracene | mg/kg | 2.99 | 0.11 U | 0.55 U | 0.11 U | 0.11 U | 0.12 U |
| Dibenzofuran | mg/kg | 1.82 | 0.11 U | 0.55 U | 0.11 U | 0.11 U | 0.12 U |
| Di-n-butyl phthalate | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| Di-n-octyl phthalate | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| Diethyl phthalate | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| Dimethyl phthalate | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| bis(2-Ethylhexyl)phthalate | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| Fluoranthene | mg/kg | 34.5 | 0.11 U | 5.24 | 0.11 U | 0.11 U | 0.12 U |
| Fluorene | mg/kg | 2.25 | 0.11 U | 0.55 U | 0.11 U | 0.11 U | 0.12 U |
| Hexachlorobenzene | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| Hexachlorobutadiene | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| Hexachlorocyclopentadiene | mg/kg | 3.0 U | 0.57 U | 2.8 U | 0.53 U | 0.55 U | 0.60 U |
| Hexachloroethane | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| Indeno(1,2,3-cd)pyrene | mg/kg | 7.44 | 0.11 U | 1.52 | 0.11 U | 0.11 U | 0.12 U |
| Isophorone | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| 2-Methylnaphthalene | mg/kg | 0.77 | 0.11 U | 0.55 U | 0.11 U | 0.11 U | 0.12 U |
| Naphthalene | mg/kg | 1.66 | 0.11 U | 0.55 U | 0.11 U | 0.11 U | 0.12 U |
| Nitrobenzene | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| N-Nitroso-di-n-propylamine | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| N-Nitrosodiphenylamine | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| Phenanthrene | mg/kg | 27.4 | 0.11 U | 3.75 | 0.11 U | 0.11 U | 0.12 U |
| Pyrene | mg/kg | 33.3 | 0.11 U | 5.37 | 0.11 U | 0.11 U | 0.12 U |
| 1,2,4-Trichlorobenzene | mg/kg | 1.5 U | 0.28 U | 1.4 U | 0.26 U | 0.27 U | 0.30 U |
| **GC Volatiles (SW846 8015)** | | | | | | | |
| TPH-GRO (VOA) | mg/kg | 6.6 U | 6.1 U | 5.7 U | 5.4 U | 5.7 U | 7.1 U |
| **GC Semi-volatiles (SW846 8082)** | | | | | | | |
| Aroclor 1016 | mg/kg | 0.039 U | 0.036 U | 0.036 U | 0.034 U | 0.037 U | 0.040 U |
| Aroclor 1221 | mg/kg | 0.039 U | 0.036 U | 0.036 U | 0.034 U | 0.037 U | 0.040 U |
| Aroclor 1232 | mg/kg | 0.039 U | 0.036 U | 0.036 U | 0.034 U | 0.037 U | 0.040 U |
| Aroclor 1242 | mg/kg | 0.039 U | 0.036 U | 0.036 U | 0.034 U | 0.037 U | 0.040 U |
| Aroclor 1248 | mg/kg | 0.039 U | 0.036 U | 0.036 U | 0.034 U | 0.037 U | 0.040 U |
| Aroclor 1254 | mg/kg | 0.477 [a] | 0.036 U | 0.111 | 0.034 U | 0.037 U | 0.040 U |
| Aroclor 1260 | mg/kg | 0.039 U | 0.036 U | 0.036 U | 0.034 U | 0.037 U | 0.040 U |
| **GC Semi-volatiles (SW846-8015)** | | | | | | | |
| TPH-DRO (Semi-VOA) | mg/kg | 428 | 18 U | 101 | 18 U | 29.8 | 20 U |
| **Metals Analysis** | | | | | | | |
| Antimony | mg/kg | 0.83 U | 0.94 U | 0.90 U | 0.87 U | 0.91 U | 0.98 U |
| Arsenic | mg/kg | 11.6 | 3 | 2.9 | 2 | 2.3 | 2.1 |
| Beryllium | mg/kg | 0.49 | 0.38 U | 0.36 U | 0.35 U | 0.37 U | 0.39 U |
| Cadmium | mg/kg | 0.33 | 0.38 U | 0.36 U | 0.35 U | 0.37 U | 0.39 U |
| Chromium | mg/kg | 12.6 | 8.3 | 6.5 | 11.5 | 6.6 | 5.6 |
| Copper | mg/kg | 32.4 | 5.3 | 17.8 | 6.2 | 5.2 | 5.6 |
| Lead | mg/kg | 403 | 5.4 | 214 | 3.5 | 13.7 | 7.4 |
| TCLP Lead | mg/L | 0.37 | NA | 0.28 | NA | NA | NA |
| Mercury | mg/kg | 0.087 | 0.038 U | 0.25 | 0.035 U | 0.037 U | 0.039 U |
| Nickel | mg/kg | 9.6 | 5.6 | 4.9 | 8.1 | 3.7 U | 3.9 U |
| Selenium | mg/kg | 3.3 | 0.94 U | 0.90 U | 0.87 U | 0.91 U | 0.98 U |
| Silver | mg/kg | 0.42 U | 0.47 U | 0.45 U | 0.43 U | 0.46 U | 0.49 U |
| Thallium | mg/kg | 0.83 U | 0.94 U | 0.90 U | 0.87 U | 0.91 U | 0.98 U |
| Zinc | mg/kg | 253 | 14.3 | 71.2 | 18.4 | 14.5 | 15.4 |
| **General Chemistry** | | | | | | | |
| Solids, Percent | % | 82.6 | 86.5 | 90.3 | 93.2 | 89 | 82 |

| Client Sample ID: | | A-2013-TP-2 0-2' | A-2013-TP-2 4-6' | A-2013-TP-3 0-2' | A-2013-TP-4 0-2' | A-2013-TP-4 4-6' | A-2013-TP-5 0-2' |
|---|---|---|---|---|---|---|---|
| Lab Sample ID: | | MC27613-13 | MC27613-14 | MC27613-15 | MC27613-16 | MC27613-17 | MC27613-18 |
| Date Sampled: | | 1/10/2014 | 1/10/2014 | 1/10/2014 | 1/10/2014 | 1/10/2014 | 1/10/2014 |
| Matrix: | | Soil | Soil | Soil | Soil | Soil | Soil |
| **GC/MS Semi-volatiles (SW846 8270D)** | | | | | | | |
| Benzoic acid | mg/kg | 0.55 U | 0.58 U | 2.9 U | 3.0 U | 0.56 U | 0.55 U |
| 2-Chlorophenol | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| 4-Chloro-3-methyl phenol | mg/kg | 0.55 U | 0.58 U | 2.9 U | 3.0 U | 0.56 U | 0.55 U |
| 2,4-Dichlorophenol | mg/kg | 0.55 U | 0.58 U | 2.9 U | 3.0 U | 0.56 U | 0.55 U |
| 2,4-Dimethylphenol | mg/kg | 0.55 U | 0.58 U | 2.9 U | 3.0 U | 0.56 U | 0.55 U |
| 2,4-Dinitrophenol | mg/kg | 1.1 U | 1.2 U | 5.8 U | 5.9 U | 1.1 U | 1.1 U |
| 2-Methylphenol | mg/kg | 0.55 U | 0.58 U | 2.9 U | 3.0 U | 0.56 U | 0.55 U |
| 3&4-Methylphenol | mg/kg | 0.55 U | 0.58 U | 2.9 U | 3.0 U | 0.56 U | 0.55 U |
| 2-Nitrophenol | mg/kg | 0.55 U | 0.58 U | 2.9 U | 3.0 U | 0.56 U | 0.55 U |
| 4-Nitrophenol | mg/kg | 1.1 U | 1.2 U | 5.8 U | 5.9 U | 1.1 U | 1.1 U |
| Pentachlorophenol | mg/kg | 0.55 U | 0.58 U | 2.9 U | 3.0 U | 0.56 U | 0.55 U |
| Phenol | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| 2,4,5-Trichlorophenol | mg/kg | 0.55 U | 0.58 U | 2.9 U | 3.0 U | 0.56 U | 0.55 U |
| 2,4,6-Trichlorophenol | mg/kg | 0.55 U | 0.58 U | 2.9 U | 3.0 U | 0.56 U | 0.55 U |
| Acenaphthene | mg/kg | 0.229 | 0.465 | 0.743 | 0.914 | 0.11 U | 0.11 U |
| Acenaphthylene | mg/kg | 0.154 | 0.12 U | 0.58 U | 2.06 | 0.11 U | 0.11 U |
| Acetophenone | mg/kg | 0.55 U | 0.58 U | 2.9 U | 3.0 U | 0.56 U | 0.55 U |
| Aniline | mg/kg | 0.55 U | 0.58 U | 2.9 U | 3.0 U | 0.56 U | 0.55 U |
| Anthracene | mg/kg | 0.639 | 0.339 | 1.83 | 5.24 | 0.11 U | 0.149 |
| Benzo(a)anthracene | mg/kg | 1.87 | 1.21 | 5.83 | 19.9 | 0.193 | 0.778 |
| Benzo(a)pyrene | mg/kg | 1.71 | 1.09 | 4.89 | 18.4 | 0.181 | 0.802 |
| Benzo(b)fluoranthene | mg/kg | 1.68 | 0.952 | 4.56 | 16.3 | 0.168 | 0.705 |
| Benzo(g,h,i)perylene | mg/kg | 1.08 | 0.626 | 2.8 | 10 | 0.111 | 0.528 |
| Benzo(k)fluoranthene | mg/kg | 1.17 | 0.854 | 4.01 | 13.6 | 0.133 | 0.636 |
| 4-Bromophenyl phenyl ether | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| Butyl benzyl phthalate | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| 2-Chloronaphthalene | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| 4-Chloroaniline | mg/kg | 0.55 U | 0.58 U | 2.9 U | 3.0 U | 0.56 U | 0.55 U |
| Chrysene | mg/kg | 1.84 | 1.18 | 5.8 | 18.2 | 0.181 | 0.849 |
| bis(2-Chloroethoxy)methane | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| bis(2-Chloroethyl)ether | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| bis(2-Chloroisopropyl)ether | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| 1,2-Dichlorobenzene | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| 1,2-Diphenylhydrazine | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| 1,3-Dichlorobenzene | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| 1,4-Dichlorobenzene | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| 2,4-Dinitrotoluene | mg/kg | 0.55 U | 0.58 U | 2.9 U | 3.0 U | 0.56 U | 0.55 U |
| 2,6-Dinitrotoluene | mg/kg | 0.55 U | 0.58 U | 2.9 U | 3.0 U | 0.56 U | 0.55 U |
| 3,3'-Dichlorobenzidine | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| Dibenzo(a,h)anthracene | mg/kg | 0.267 | 0.219 | 0.905 | 3.7 | 0.11 U | 0.174 |
| Dibenzofuran | mg/kg | 0.179 | 0.315 | 0.58 U | 1.07 | 0.11 U | 0.11 U |
| Di-n-butyl phthalate | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| Di-n-octyl phthalate | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| Diethyl phthalate | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| Dimethyl phthalate | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| bis(2-Ethylhexyl)phthalate | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| Fluoranthene | mg/kg | 3.84 | 2.56 | 11.6 | 45.1 | 0.397 | 1.4 |
| Fluorene | mg/kg | 0.208 | 0.309 | 0.767 | 1.45 | 0.11 U | 0.11 U |
| Hexachlorobenzene | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| Hexachlorobutadiene | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| Hexachlorocyclopentadiene | mg/kg | 0.55 U | 0.58 U | 2.9 U | 3.0 U | 0.56 U | 0.55 U |
| Hexachloroethane | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.983 | 0.566 | 2.77 | 9.82 | 0.11 U | 0.471 |
| Isophorone | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| 2-Methylnaphthalene | mg/kg | 0.11 U | 0.164 | 0.58 U | 0.59 U | 0.11 U | 0.11 U |
| Naphthalene | mg/kg | 0.129 | 0.492 | 0.58 U | 0.688 | 0.11 U | 0.11 U |
| Nitrobenzene | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| N-Nitroso-di-n-propylamine | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| N-Nitrosodiphenylamine | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| Phenanthrene | mg/kg | 2.79 | 2.55 | 9.04 | 25.8 | 0.244 | 0.814 |
| Pyrene | mg/kg | 3.76 | 2.45 | 10.7 | 41.1 | 0.376 | 1.57 |
| 1,2,4-Trichlorobenzene | mg/kg | 0.28 U | 0.29 U | 1.4 U | 1.5 U | 0.28 U | 0.27 U |
| **GC Volatiles (SW846 8015)** | | | | | | | |
| TPH-GRO (VOA) | mg/kg | 5.8 U | 6.7 U | 6.5 U | 6.6 U | 5.9 U | 6.1 U |
| **GC Semi-volatiles (SW846 8082)** | | | | | | | |
| Aroclor 1016 | mg/kg | 0.038 U | 0.038 U | 0.037 U | 0.039 U | 0.036 U | 0.037 U |
| Aroclor 1221 | mg/kg | 0.038 U | 0.038 U | 0.037 U | 0.039 U | 0.036 U | 0.037 U |
| Aroclor 1232 | mg/kg | 0.038 U | 0.038 U | 0.037 U | 0.039 U | 0.036 U | 0.037 U |
| Aroclor 1242 | mg/kg | 0.038 U | 0.038 U | 0.037 U | 0.039 U | 0.036 U | 0.037 U |
| Aroclor 1248 | mg/kg | 0.038 U | 0.038 U | 0.037 U | 0.039 U | 0.036 U | 0.037 U |
| Aroclor 1254 | mg/kg | 0.101 [a] | 0.038 U | 0.037 U | 0.144 | 0.036 U | 0.037 U |
| Aroclor 1260 | mg/kg | 0.038 U | 0.038 U | 0.037 U | 0.039 U | 0.036 U | 0.037 U |
| **GC Semi-volatiles (SW846-8015)** | | | | | | | |
| TPH-DRO (Semi-VOA) | mg/kg | 72.6 | 19 U | 214 | 737 | 18 U | 18 U |
| **Metals Analysis** | | | | | | | |
| Antimony | mg/kg | 0.90 U | 0.94 U | 0.94 U | 0.99 U | 0.91 U | 0.89 U |
| Arsenic | mg/kg | 2 | 5.2 | 7.1 | 5.3 | 2.2 | 3 |
| Beryllium | mg/kg | 0.36 U | 0.53 | 0.37 | 0.40 U | 0.36 U | 0.36 U |
| Cadmium | mg/kg | 0.36 U | 0.38 U | 0.37 U | 0.40 U | 0.36 U | 0.36 U |
| Chromium | mg/kg | 7 | 10.7 | 9.9 | 6.4 | 6.6 | 5.5 |
| Copper | mg/kg | 92.4 | 28.7 | 16.4 | 30.2 | 6.6 | 9.7 |
| Lead | mg/kg | 66.4 | 11.3 | 1010 | 830 | 23 | 53.1 |
| TCLP Lead | mg/L | NA | NA | 2.5 | 0.78 | NA | NA |
| Mercury | mg/kg | 0.047 | 0.037 U | 0.099 | 0.21 | 0.037 U | 0.12 |
| Nickel | mg/kg | 5.6 | 4.9 | 6.2 | 7.6 | 5.4 | 4.2 |
| Selenium | mg/kg | 0.90 U | 0.94 U | 0.94 U | 0.99 U | 0.91 U | 0.89 U |
| Silver | mg/kg | 0.45 U | 0.47 U | 0.47 U | 0.50 U | 0.45 U | 0.45 U |
| Thallium | mg/kg | 0.90 U | 0.94 U | 0.94 U | 0.99 U | 0.91 U | 0.89 U |
| Zinc | mg/kg | 34.8 | 46.2 | 373 | 297 | 22 | 53 |
| **General Chemistry** | | | | | | | |
| Solids, Percent | % | 88.5 | 85.3 | 86.1 | 82.7 | 88.3 | 88.8 |

| Client Sample ID: | | A-2013-TP-5 4'-6' | A-2013-TP-6 0-2' | A-2013-TP-6 4-6' | A-2013-TP-7 0-2' | A-2013-TP-7 4-6' | A-2013-TP-8-0-2' |
|---|---|---|---|---|---|---|---|
| Lab Sample ID: | | MC27613-19 | MC27613-20 | MC27613-21 | MC27613-22 | MC27613-23 | MC27613-24 |
| Date Sampled: | | 1/10/2014 | 1/10/2014 | 1/10/2014 | 1/10/2014 | 1/10/2014 | 1/10/2014 |
| Matrix: | | Soil | Soil | Soil | Soil | Soil | Soil |
| **GC/MS Semi-volatiles (SW846 8270D)** | | | | | | | |
| Benzoic acid | mg/kg | 0.57 U | 2.7 U | 0.54 U | 5.5 U | 0.57 U | 0.63 U |
| 2-Chlorophenol | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| 4-Chloro-3-methyl phenol | mg/kg | 0.57 U | 2.7 U | 0.54 U | 5.5 U | 0.57 U | 0.63 U |
| 2,4-Dichlorophenol | mg/kg | 0.57 U | 2.7 U | 0.54 U | 5.5 U | 0.57 U | 0.63 U |
| 2,4-Dimethylphenol | mg/kg | 0.57 U | 2.7 U | 0.54 U | 5.5 U | 0.57 U | 0.63 U |
| 2,4-Dinitrophenol | mg/kg | 1.1 U | 5.4 U | 1.1 U | 11 U | 1.1 U | 1.3 U |
| 2-Methylphenol | mg/kg | 0.57 U | 2.7 U | 0.54 U | 5.5 U | 0.57 U | 0.63 U |
| 3&4-Methylphenol | mg/kg | 0.57 U | 2.7 U | 0.54 U | 5.5 U | 0.57 U | 0.63 U |
| 2-Nitrophenol | mg/kg | 0.57 U | 2.7 U | 0.54 U | 5.5 U | 0.57 U | 0.63 U |
| 4-Nitrophenol | mg/kg | 1.1 U | 5.4 U | 1.1 U | 11 U | 1.1 U | 1.3 U |
| Pentachlorophenol | mg/kg | 0.57 U | 2.7 U | 0.54 U | 5.5 U | 0.57 U | 0.63 U |
| Phenol | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| 2,4,5-Trichlorophenol | mg/kg | 0.57 U | 2.7 U | 0.54 U | 5.5 U | 0.57 U | 0.63 U |
| 2,4,6-Trichlorophenol | mg/kg | 0.57 U | 2.7 U | 0.54 U | 5.5 U | 0.57 U | 0.63 U |
| Acenaphthene | mg/kg | 0.11 U | 0.54 U | 0.11 U | 26.1 | 0.11 U | 0.13 U |
| Acenaphthylene | mg/kg | 0.11 U | 0.54 U | 0.123 | 7.28 | 0.11 U | 0.13 U |
| Acetophenone | mg/kg | 0.57 U | 2.7 U | 0.54 U | 5.5 U | 0.57 U | 0.63 U |
| Aniline | mg/kg | 0.57 U | 2.7 U | 0.54 U | 5.5 U | 0.57 U | 0.63 U |
| Anthracene | mg/kg | 0.11 U | 0.754 | 0.262 | 44.7 | 0.11 U | 0.13 U |
| Benzo(a)anthracene | mg/kg | 0.11 U | 4.36 | 1.3 | 92.6 | 0.11 U | 0.164 |
| Benzo(a)pyrene | mg/kg | 0.11 U | 4.4 | 1.35 | 83.2 | 0.11 U | 0.174 |
| Benzo(b)fluoranthene | mg/kg | 0.11 U | 3.85 | 1.22 | 70.3 | 0.11 U | 0.154 |
| Benzo(g,h,i)perylene | mg/kg | 0.11 U | 2.88 | 0.863 | 46.9 | 0.11 U | 0.13 U |
| Benzo(k)fluoranthene | mg/kg | 0.11 U | 3.29 | 1.02 | 51.8 | 0.11 U | 0.13 U |
| 4-Bromophenyl phenyl ether | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| Butyl benzyl phthalate | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| 2-Chloronaphthalene | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| 4-Chloroaniline | mg/kg | 0.57 U | 2.7 U | 0.54 U | 5.5 U | 0.57 U | 0.63 U |
| Chrysene | mg/kg | 0.11 U | 4.05 | 1.3 | 90.8 | 0.11 U | 0.145 |
| bis(2-Chloroethoxy)methane | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| bis(2-Chloroethyl)ether | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| bis(2-Chloroisopropyl)ether | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| 1,2-Dichlorobenzene | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| 1,2-Diphenylhydrazine | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| 1,3-Dichlorobenzene | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| 1,4-Dichlorobenzene | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| 2,4-Dinitrotoluene | mg/kg | 0.57 U | 2.7 U | 0.54 U | 5.5 U | 0.57 U | 0.63 U |
| 2,6-Dinitrotoluene | mg/kg | 0.57 U | 2.7 U | 0.54 U | 5.5 U | 0.57 U | 0.63 U |
| 3,3'-Dichlorobenzidine | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| Dibenzo(a,h)anthracene | mg/kg | 0.11 U | 0.673 | 0.266 | 16 | 0.11 U | 0.13 U |
| Dibenzofuran | mg/kg | 0.11 U | 0.54 U | 0.11 U | 18.9 | 0.11 U | 0.13 U |
| Di-n-butyl phthalate | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| Di-n-octyl phthalate | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| Diethyl phthalate | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| Dimethyl phthalate | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| bis(2-Ethylhexyl)phthalate | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| Fluoranthene | mg/kg | 0.11 U | 7.41 | 2.42 | 224 | 0.211 | 0.314 |
| Fluorene | mg/kg | 0.11 U | 0.54 U | 0.11 U | 22.2 | 0.11 U | 0.13 U |
| Hexachlorobenzene | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| Hexachlorobutadiene | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| Hexachlorocyclopentadiene | mg/kg | 0.57 U | 2.7 U | 0.54 U | 5.5 U | 0.57 U | 0.63 U |
| Hexachloroethane | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.11 U | 2.65 | 0.81 | 43.4 | 0.11 U | 0.13 U |
| Isophorone | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| 2-Methylnaphthalene | mg/kg | 0.11 U | 0.54 U | 0.11 U | 6.83 | 0.11 U | 0.13 U |
| Naphthalene | mg/kg | 0.11 U | 0.54 U | 0.11 U | 12.9 | 0.11 U | 0.13 U |
| Nitrobenzene | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| N-Nitroso-di-n-propylamine | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| N-Nitrosodiphenylamine | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| Phenanthrene | mg/kg | 0.11 U | 2.88 | 1.22 | 235 | 0.201 | 0.13 |
| Pyrene | mg/kg | 0.11 U | 7.78 | 2.42 | 200 | 0.196 | 0.311 |
| 1,2,4-Trichlorobenzene | mg/kg | 0.28 U | 1.4 U | 0.27 U | 2.8 U | 0.28 U | 0.31 U |
| **GC Volatiles (SW846 8015)** | | | | | | | |
| TPH-GRO (VOA) | mg/kg | 6.3 U | 5.7 U | 5.8 U | 5.8 U | 6.4 U | 7.6 U |
| **GC Semi-volatiles (SW846 8082)** | | | | | | | |
| Aroclor 1016 | mg/kg | 0.037 U | 0.036 U | 0.037 U | 0.036 U | 0.038 U | 0.042 U |
| Aroclor 1221 | mg/kg | 0.037 U | 0.036 U | 0.037 U | 0.036 U | 0.038 U | 0.042 U |
| Aroclor 1232 | mg/kg | 0.037 U | 0.036 U | 0.037 U | 0.036 U | 0.038 U | 0.042 U |
| Aroclor 1242 | mg/kg | 0.037 U | 0.036 U | 0.037 U | 0.036 U | 0.038 U | 0.042 U |
| Aroclor 1248 | mg/kg | 0.037 U | 0.036 U | 0.037 U | 0.036 U | 0.038 U | 0.042 U |
| Aroclor 1254 | mg/kg | 0.037 U | 0.111 | 0.0537 [a] | 0.904 | 0.038 U | 0.0715 |
| Aroclor 1260 | mg/kg | 0.037 U | 0.036 U | 0.037 U | 0.036 U | 0.038 U | 0.042 U |
| **GC Semi-volatiles (SW846-8015)** | | | | | | | |
| TPH-DRO (Semi-VOA) | mg/kg | 19 U | 105 | 48.4 | 3310 | 19 U | 20 U |
| **Metals Analysis** | | | | | | | |
| Antimony | mg/kg | 0.92 U | 0.89 U | 0.90 U | 0.88 U | 0.96 U | 1.0 U |
| Arsenic | mg/kg | 1.9 | 5.2 | 2 | 6.9 | 3.7 | 3.6 |
| Beryllium | mg/kg | 0.37 U | 0.36 U | 0.36 U | 0.35 U | 0.38 U | 0.41 U |
| Cadmium | mg/kg | 0.37 U | 0.36 U | 0.36 U | 0.35 U | 0.38 U | 0.41 U |
| Chromium | mg/kg | 4.5 | 7.6 | 6.1 | 6.6 | 6.9 | 8 |
| Copper | mg/kg | 4.1 | 47.6 | 8.2 | 36.1 | 4.2 | 17.4 |
| Lead | mg/kg | 3.6 | 831 | 57 | 500 | 8.5 | 49.3 |
| TCLP Lead | mg/L | NA | 0.98 | NA | 0.36 | NA | NA |
| Mercury | mg/kg | 0.038 U | 0.46 | 0.036 U | 0.34 | 0.038 U | 0.077 |
| Nickel | mg/kg | 4.2 | 7.9 | 4.5 | 4.9 | 4.5 | 4.1 U |
| Selenium | mg/kg | 0.92 U | 0.89 U | 0.90 U | 0.88 U | 0.96 U | 1.0 U |
| Silver | mg/kg | 0.46 U | 0.44 U | 0.45 U | 0.44 U | 0.48 U | 0.51 U |
| Thallium | mg/kg | 0.92 U | 0.89 U | 0.90 U | 0.88 U | 0.96 U | 1.0 U |
| Zinc | mg/kg | 15.5 | 359 | 46.2 | 182 | 19.5 | 24.2 |
| **General Chemistry** | | | | | | | |
| Solids, Percent | % | 85.5 | 89.3 | 90.5 | 90.7 | 84.4 | 79.3 |

| Client Sample ID: | | A-2013-TP-8-4-6' | DUP-2320 | DUP-2321 | | | |
|---|---|---|---|---|---|---|---|
| Lab Sample ID: | | MC27613-25 | MC27613-26 | MC27613-27 | | | |
| Date Sampled: | | 1/10/2014 | 1/10/2014 | 1/10/2014 | | | |
| Matrix: | | Soil | Soil | Soil | | | |
| **GC/MS Semi-volatiles (SW846 8270D)** | | | | | | | |
| Benzoic acid | mg/kg | 0.57 U | 0.56 U | 0.54 U | | | |
| 2-Chlorophenol | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| 4-Chloro-3-methyl phenol | mg/kg | 0.57 U | 0.56 U | 0.54 U | | | |
| 2,4-Dichlorophenol | mg/kg | 0.57 U | 0.56 U | 0.54 U | | | |
| 2,4-Dimethylphenol | mg/kg | 0.57 U | 0.56 U | 0.54 U | | | |
| 2,4-Dinitrophenol | mg/kg | 1.1 U | 1.1 U | 1.1 U | | | |
| 2-Methylphenol | mg/kg | 0.57 U | 0.56 U | 0.54 U | | | |
| 3&4-Methylphenol | mg/kg | 0.57 U | 0.56 U | 0.54 U | | | |
| 2-Nitrophenol | mg/kg | 0.57 U | 0.56 U | 0.54 U | | | |
| 4-Nitrophenol | mg/kg | 1.1 U | 1.1 U | 1.1 U | | | |
| Pentachlorophenol | mg/kg | 0.57 U | 0.56 U | 0.54 U | | | |
| Phenol | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| 2,4,5-Trichlorophenol | mg/kg | 0.57 U | 0.56 U | 0.54 U | | | |
| 2,4,6-Trichlorophenol | mg/kg | 0.57 U | 0.56 U | 0.54 U | | | |
| Acenaphthene | mg/kg | 0.11 U | 0.11 U | 0.138 | | | |
| Acenaphthylene | mg/kg | 0.11 U | 0.11 U | 0.11 U | | | |
| Acetophenone | mg/kg | 0.57 U | 0.56 U | 0.54 U | | | |
| Aniline | mg/kg | 0.57 U | 0.56 U | 0.54 U | | | |
| Anthracene | mg/kg | 0.11 U | 0.11 U | 0.303 | | | |
| Benzo(a)anthracene | mg/kg | 0.126 | 0.11 U | 1.22 | | | |
| Benzo(a)pyrene | mg/kg | 0.132 | 0.11 U | 1.29 | | | |
| Benzo(b)fluoranthene | mg/kg | 0.125 | 0.11 U | 1.22 | | | |
| Benzo(g,h,i)perylene | mg/kg | 0.11 U | 0.11 U | 0.831 | | | |
| Benzo(k)fluoranthene | mg/kg | 0.11 U | 0.11 U | 0.925 | | | |
| 4-Bromophenyl phenyl ether | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| Butyl benzyl phthalate | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| 2-Chloronaphthalene | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| 4-Chloroaniline | mg/kg | 0.57 U | 0.56 U | 0.54 U | | | |
| Chrysene | mg/kg | 0.11 U | 0.11 U | 1.21 | | | |
| bis(2-Chloroethoxy)methane | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| bis(2-Chloroethyl)ether | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| bis(2-Chloroisopropyl)ether | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| 1,2-Dichlorobenzene | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| 1,2-Diphenylhydrazine | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| 1,3-Dichlorobenzene | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| 1,4-Dichlorobenzene | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| 2,4-Dinitrotoluene | mg/kg | 0.57 U | 0.56 U | 0.54 U | | | |
| 2,6-Dinitrotoluene | mg/kg | 0.57 U | 0.56 U | 0.54 U | | | |
| 3,3'-Dichlorobenzidine | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| Dibenzo(a,h)anthracene | mg/kg | 0.11 U | 0.11 U | 0.268 | | | |
| Dibenzofuran | mg/kg | 0.11 U | 0.11 U | 0.11 U | | | |
| Di-n-butyl phthalate | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| Di-n-octyl phthalate | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| Diethyl phthalate | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| Dimethyl phthalate | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| bis(2-Ethylhexyl)phthalate | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| Fluoranthene | mg/kg | 0.256 | 0.11 U | 2.43 | | | |
| Fluorene | mg/kg | 0.11 U | 0.11 U | 0.156 | | | |
| Hexachlorobenzene | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| Hexachlorobutadiene | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| Hexachlorocyclopentadiene | mg/kg | 0.57 U | 0.56 U | 0.54 U | | | |
| Hexachloroethane | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.11 U | 0.11 U | 0.78 | | | |
| Isophorone | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| 2-Methylnaphthalene | mg/kg | 0.11 U | 0.11 U | 0.11 U | | | |
| Naphthalene | mg/kg | 0.11 U | 0.11 U | 0.11 U | | | |
| Nitrobenzene | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| N-Nitroso-di-n-propylamine | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| N-Nitrosodiphenylamine | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| Phenanthrene | mg/kg | 0.11 U | 0.11 U | 1.55 | | | |
| Pyrene | mg/kg | 0.244 | 0.111 | 2.35 | | | |
| 1,2,4-Trichlorobenzene | mg/kg | 0.28 U | 0.28 U | 0.27 U | | | |
| **GC Volatiles (SW846 8015)** | | | | | | | |
| TPH-GRO (VOA) | mg/kg | 6.4 U | 6.3 U | 5.8 U | | | |
| **GC Semi-volatiles (SW846 8082)** | | | | | | | |
| Aroclor 1016 | mg/kg | 0.038 U | 0.038 U | 0.037 U | | | |
| Aroclor 1221 | mg/kg | 0.038 U | 0.038 U | 0.037 U | | | |
| Aroclor 1232 | mg/kg | 0.038 U | 0.038 U | 0.037 U | | | |
| Aroclor 1242 | mg/kg | 0.038 U | 0.038 U | 0.037 U | | | |
| Aroclor 1248 | mg/kg | 0.038 U | 0.038 U | 0.037 U | | | |
| Aroclor 1254 | mg/kg | 0.0723 | 0.038 U | 0.0418 [a] | | | |
| Aroclor 1260 | mg/kg | 0.038 U | 0.038 U | 0.037 U | | | |
| **GC Semi-volatiles (SW846-8015)** | | | | | | | |
| TPH-DRO (Semi-VOA) | mg/kg | 18 U | 19 U | 121 | | | |
| **Metals Analysis** | | | | | | | |
| Antimony | mg/kg | 0.92 U | 0.91 U | 0.90 U | | | |
| Arsenic | mg/kg | 2.1 | 2 | 2.1 | | | |
| Beryllium | mg/kg | 0.37 U | 0.36 U | 0.36 U | | | |
| Cadmium | mg/kg | 0.37 U | 0.36 U | 0.36 U | | | |
| Chromium | mg/kg | 10.7 | 5 | 6.1 | | | |
| Copper | mg/kg | 6.8 | 4.1 | 7.2 | | | |
| Lead | mg/kg | 8.1 | 9.9 | 44.5 | | | |
| TCLP Lead | mg/L | NA | NA | NA | | | |
| Mercury | mg/kg | 0.036 U | 0.037 U | 0.045 | | | |
| Nickel | mg/kg | 6.2 | 3.6 U | 3.8 | | | |
| Selenium | mg/kg | 0.92 U | 0.91 U | 0.90 U | | | |
| Silver | mg/kg | 0.46 U | 0.46 U | 0.45 U | | | |
| Thallium | mg/kg | 0.92 U | 0.91 U | 0.90 U | | | |
| Zinc | mg/kg | 16.2 | 10.2 | 41.5 | | | |
| **General Chemistry** | | | | | | | |
| Solids, Percent | % | 87.2 | 87.8 | 89.6 | | | |

**Footnotes:**

[a] Due to Matrix Interference less than five GC peaks characteristic for reported Aroclors are used for quantization.

NA - Not Analyzed

| Accutest Labs of New England, Inc. | | | | | | | 8/22/2014 12:10 |
|---|---|---|---|---|---|---|---|
| Job Number: | MC27810 | | | | | | |
| Account: | Apex Companies, LLC | | | | | | |
| Project: | NBMCT, Blackmer, New Bedford, MA | | | | | | |
| Project Number: | 6690.027 | | | | | | |
| | | | | | Legend: | Hit | Exceed |

| Client Sample ID: | | MA MCP Method 1: GW-3 Standard (310 CMR 6/14) | MW-1 | MW-1 | MW-2 | MW-2 | MW-3 |
|---|---|---|---|---|---|---|---|
| Lab Sample ID: | | | MC27810-1 | MC27810-1F | MC27810-2 | MC27810-2F | MC27810-3 |
| Date Sampled: | | | 1/21/2014 | 1/21/2014 | 1/21/2014 | 1/21/2014 | 1/21/2014 |
| Matrix: | | | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water |
| **GC/MS Semi-volatiles (SW846 8270D)** | | | | | | | |
| Benzoic Acid | mg/l | - | 0.010 U | - | 0.010 U | - | 0.010 U |
| 2-Chlorophenol | mg/l | 7 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 4-Chloro-3-methyl phenol | mg/l | - | 0.010 U | - | 0.010 U | - | 0.010 U |
| 2,4-Dichlorophenol | mg/l | 2 | 0.010 U | - | 0.010 U | - | 0.010 U |
| 2,4-Dimethylphenol | mg/l | 50 | 0.010 U | - | 0.010 U | - | 0.010 U |
| 2,4-Dinitrophenol | mg/l | 20 | 0.020 U | - | 0.020 U | - | 0.020 U |
| 2-Methylphenol | mg/l | - | 0.010 U | - | 0.010 U | - | 0.010 U |
| 3&4-Methylphenol | mg/l | - | 0.010 U | - | 0.010 U | - | 0.010 U |
| 2-Nitrophenol | mg/l | - | 0.010 U | - | 0.010 U | - | 0.010 U |
| 4-Nitrophenol | mg/l | - | 0.020 U | - | 0.020 U | - | 0.020 U |
| Pentachlorophenol | mg/l | 0.2 | 0.010 U | - | 0.010 U | - | 0.010 U |
| Phenol | mg/l | 2 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 2,4,5-Trichlorophenol | mg/l | 3 | 0.010 U | - | 0.010 U | - | 0.010 U |
| 2,4,6-Trichlorophenol | mg/l | 0.5 | 0.010 U | - | 0.010 U | - | 0.010 U |
| Acenaphthene | mg/l | 10 | 0.0020 U | - | 0.0020 U | - | 0.0020 U |
| Acenaphthylene | mg/l | 0.04 | 0.0020 U | - | 0.0020 U | - | 0.0020 U |
| Acetophenone | mg/l | - | 0.010 U | - | 0.010 U | - | 0.010 U |
| Aniline | mg/l | - | 0.010 U | - | 0.010 U | - | 0.010 U |
| Anthracene | mg/l | 0.03 | 0.0020 U | - | 0.0020 U | - | 0.0020 U |
| Benzo(a)anthracene | mg/l | 1 | 0.0020 U | - | 0.0020 U | - | 0.0045 |
| Benzo(a)pyrene | mg/l | 0.5 | 0.0020 U | - | 0.0020 U | - | 0.0043 |
| Benzo(b)fluoranthene | mg/l | 0.4 | 0.0020 U | - | 0.0020 U | - | 0.0036 |
| Benzo(g,h,i)perylene | mg/l | 0.02 | 0.0020 U | - | 0.0020 U | - | 0.0027 |
| Benzo(k)fluoranthene | mg/l | 0.1 | 0.0020 U | - | 0.0020 U | - | 0.0035 |
| 4-Bromophenyl phenyl ether | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Butyl benzyl phthalate | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 2-Chloronaphthalene | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 4-Chloroaniline | mg/l | 0.3 | 0.010 U | - | 0.010 U | - | 0.010 U |
| Chrysene | mg/l | 0.07 | 0.0020 U | - | 0.0020 U | - | 0.004 |
| bis(2-Chloroethoxy)methane | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| bis(2-Chloroethyl)ether | mg/l | 50 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| bis(2-Chloroisopropyl)ether | mg/l | 50 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 1,2-Dichlorobenzene | mg/l | 2 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 1,2-Diphenylhydrazine | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 1,3-Dichlorobenzene | mg/l | 50 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 1,4-Dichlorobenzene | mg/l | 8 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 2,4-Dinitrotoluene | mg/l | 50 | 0.010 U | - | 0.010 U | - | 0.010 U |
| 2,6-Dinitrotoluene | mg/l | - | 0.010 U | - | 0.010 U | - | 0.010 U |
| 3,3'-Dichlorobenzidine | mg/l | 2 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Dibenzo(a,h)anthracene | mg/l | 0.04 | 0.0020 U | - | 0.0020 U | - | 0.0020 U |
| Dibenzofuran | mg/l | - | 0.0020 U | - | 0.0020 U | - | 0.0020 U |
| Di-n-butyl phthalate | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Di-n-octyl phthalate | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Diethyl phthalate | mg/l | 9 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Dimethyl phthalate | mg/l | 50 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| bis(2-Ethylhexyl)phthalate | mg/l | 50 | 0.0020 U | - | 0.0020 U | - | 0.0020 U |
| Fluoranthene | mg/l | 0.2 | 0.0020 U | - | 0.0020 U | - | 0.0099 |
| Fluorene | mg/l | 0.04 | 0.0020 U | - | 0.0020 U | - | 0.0020 U |
| Hexachlorobenzene | mg/l | 6 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Hexachlorobutadiene | mg/l | 3 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Hexachlorocyclopentadiene | mg/l | - | 0.010 U | - | 0.010 U | - | 0.010 U |
| Hexachloroethane | mg/l | 50 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Indeno(1,2,3-cd)pyrene | mg/l | 0.1 | 0.0020 U | - | 0.0020 U | - | 0.0025 |
| Isophorone | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 2-Methylnaphthalene | mg/l | 20 | 0.0020 U | - | 0.0020 U | - | 0.0020 U |
| Naphthalene | mg/l | 20 | 0.0020 U | - | 0.0020 U | - | 0.0020 U |
| Nitrobenzene | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| N-Nitroso-di-n-propylamine | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| N-Nitrosodiphenylamine | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Phenanthrene | mg/l | 10 | 0.0020 U | - | 0.0020 U | - | 0.0042 |
| Pyrene | mg/l | 0.02 | 0.0020 U | - | 0.0020 U | - | 0.0092 |
| 1,2,4-Trichlorobenzene | mg/l | 50 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| **GC Semi-volatiles (SW846 8082)** | | | | | | | |
| Aroclor 1016 | mg/l | 0.01 | 0.00027 U | - | 0.00031 U | - | 0.00030 U |
| Aroclor 1221 | mg/l | 0.01 | 0.00027 U | - | 0.00031 U | - | 0.00030 U |
| Aroclor 1232 | mg/l | 0.01 | 0.00027 U | - | 0.00031 U | - | 0.00030 U |
| Aroclor 1242 | mg/l | 0.01 | 0.00027 U | - | 0.00031 U | - | 0.00030 U |
| Aroclor 1248 | mg/l | 0.01 | 0.00027 U | - | 0.00031 U | - | 0.00030 U |
| Aroclor 1254 | mg/l | 0.01 | 0.0022 | - | 0.00031 U | - | 0.00030 U |
| Aroclor 1260 | mg/l | 0.01 | 0.00027 U | - | 0.00031 U | - | 0.00030 U |
| Aroclor 1262 | mg/l | 0.01 | 0.00027 U | - | 0.00031 U | - | 0.00030 U |
| Aroclor 1268 | mg/l | 0.01 | 0.00027 U | - | 0.00031 U | - | 0.00030 U |
| **GC Semi-volatiles (SW846-8015)** | | | | | | | |
| TPH-DRO (Semi-VOA) | mg/l | - | 0.24 U | - | 0.24 U | - | 0.26 U |
| **Metals Analysis** | | | | | | | |
| Antimony | mg/l | 8 | - | 0.0060 U | - | 0.0060 U | - |
| Arsenic | mg/l | 0.9 | - | 0.0040 U | - | 0.0040 U | - |
| Beryllium | mg/l | 0.2 | - | 0.0040 U | - | 0.0040 U | - |
| Cadmium | mg/l | 0.004 | - | 0.0040 U | - | 0.0040 U | - |
| Chromium | mg/l | 0.3 | - | 0.010 U | - | 0.010 U | - |
| Copper | mg/l | - | - | 0.025 U | - | 0.025 U | - |
| Lead | mg/l | 0.01 | - | 0.0050 U | - | 0.0050 U | - |
| Mercury | mg/l | 0.02 | - | 0.00020 U | - | 0.00020 U | - |
| Nickel | mg/l | 0.2 | - | 0.040 U | - | 0.040 U | - |
| Selenium | mg/l | 0.1 | - | 0.010 U | - | 0.010 U | - |
| Silver | mg/l | 0.007 | - | 0.0050 U | - | 0.0050 U | - |
| Thallium | mg/l | 3 | - | 0.0050 U | - | 0.0050 U | - |
| Zinc | mg/l | 0.9 | - | 0.020 U | - | 0.020 U | - |

| Client Sample ID: | | MA MCP Method | MW-3 | MW-5 | MW-5 | DUP-C-W-100 | DUP-C-W-100 |
|---|---|---|---|---|---|---|---|
| Lab Sample ID: | | 1: GW-3 | MC27810-3F | MC27810-4 | MC27810-4F | MC27810-5 | MC27810-5F |
| Date Sampled: | | Standard (310 | 1/21/2014 | 1/21/2014 | 1/21/2014 | 1/21/2014 | 1/21/2014 |
| Matrix: | | CMR 6/14) | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water |
| **GC/MS Semi-volatiles (SW846 8270D)** | | | | | | | |
| Benzoic Acid | mg/l | - | - | 0.010 U | - | 0.010 U | - |
| 2-Chlorophenol | mg/l | 7 | - | 0.0050 U | - | 0.0050 U | - |
| 4-Chloro-3-methyl phenol | mg/l | - | - | 0.010 U | - | 0.010 U | - |
| 2,4-Dichlorophenol | mg/l | 2 | - | 0.010 U | - | 0.010 U | - |
| 2,4-Dimethylphenol | mg/l | 50 | - | 0.010 U | - | 0.010 U | - |
| 2,4-Dinitrophenol | mg/l | 20 | - | 0.020 U | - | 0.020 U | - |
| 2-Methylphenol | mg/l | - | - | 0.010 U | - | 0.010 U | - |
| 3&4-Methylphenol | mg/l | - | - | 0.010 U | - | 0.010 U | - |
| 2-Nitrophenol | mg/l | - | - | 0.010 U | - | 0.010 U | - |
| 4-Nitrophenol | mg/l | - | - | 0.020 U | - | 0.020 U | - |
| Pentachlorophenol | mg/l | 0.2 | - | 0.010 U | - | 0.010 U | - |
| Phenol | mg/l | 2 | - | 0.0050 U | - | 0.0050 U | - |
| 2,4,5-Trichlorophenol | mg/l | 3 | - | 0.010 U | - | 0.010 U | - |
| 2,4,6-Trichlorophenol | mg/l | 0.5 | - | 0.010 U | - | 0.010 U | - |
| Acenaphthene | mg/l | 10 | - | 0.0020 U | - | 0.0020 U | - |
| Acenaphthylene | mg/l | 0.04 | - | 0.0020 U | - | 0.0020 U | - |
| Acetophenone | mg/l | - | - | 0.010 U | - | 0.010 U | - |
| Aniline | mg/l | - | - | 0.010 U | - | 0.010 U | - |
| Anthracene | mg/l | 0.03 | - | 0.0020 U | - | 0.0020 U | - |
| Benzo(a)anthracene | mg/l | 1 | - | 0.0020 U | - | 0.0020 U | - |
| Benzo(a)pyrene | mg/l | 0.5 | - | 0.0020 U | - | 0.0020 U | - |
| Benzo(b)fluoranthene | mg/l | 0.4 | - | 0.0020 U | - | 0.0020 U | - |
| Benzo(g,h,i)perylene | mg/l | 0.02 | - | 0.0020 U | - | 0.0020 U | - |
| Benzo(k)fluoranthene | mg/l | 0.1 | - | 0.0020 U | - | 0.0020 U | - |
| 4-Bromophenyl phenyl ether | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| Butyl benzyl phthalate | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| 2-Chloronaphthalene | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| 4-Chloroaniline | mg/l | 0.3 | - | 0.010 U | - | 0.010 U | - |
| Chrysene | mg/l | 0.07 | - | 0.0020 U | - | 0.0020 U | - |
| bis(2-Chloroethoxy)methane | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| bis(2-Chloroethyl)ether | mg/l | 50 | - | 0.0050 U | - | 0.0050 U | - |
| bis(2-Chloroisopropyl)ether | mg/l | 50 | - | 0.0050 U | - | 0.0050 U | - |
| 1,2-Dichlorobenzene | mg/l | 2 | - | 0.0050 U | - | 0.0050 U | - |
| 1,2-Diphenylhydrazine | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| 1,3-Dichlorobenzene | mg/l | 50 | - | 0.0050 U | - | 0.0050 U | - |
| 1,4-Dichlorobenzene | mg/l | 8 | - | 0.0050 U | - | 0.0050 U | - |
| 2,4-Dinitrotoluene | mg/l | 50 | - | 0.010 U | - | 0.010 U | - |
| 2,6-Dinitrotoluene | mg/l | - | - | 0.010 U | - | 0.010 U | - |
| 3,3'-Dichlorobenzidine | mg/l | 2 | - | 0.0050 U | - | 0.0050 U | - |
| Dibenzo(a,h)anthracene | mg/l | 0.04 | - | 0.0020 U | - | 0.0020 U | - |
| Dibenzofuran | mg/l | - | - | 0.0020 U | - | 0.0020 U | - |
| Di-n-butyl phthalate | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| Di-n-octyl phthalate | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| Diethyl phthalate | mg/l | 9 | - | 0.0050 U | - | 0.0050 U | - |
| Dimethyl phthalate | mg/l | 50 | - | 0.0050 U | - | 0.0050 U | - |
| bis(2-Ethylhexyl)phthalate | mg/l | 50 | - | 0.0020 U | - | 0.0020 U | - |
| Fluoranthene | mg/l | 0.2 | - | 0.0020 U | - | 0.0020 U | - |
| Fluorene | mg/l | 0.04 | - | 0.0020 U | - | 0.0020 U | - |
| Hexachlorobenzene | mg/l | 6 | - | 0.0050 U | - | 0.0050 U | - |
| Hexachlorobutadiene | mg/l | 3 | - | 0.0050 U | - | 0.0050 U | - |
| Hexachlorocyclopentadiene | mg/l | - | - | 0.010 U | - | 0.010 U | - |
| Hexachloroethane | mg/l | 50 | - | 0.0050 U | - | 0.0050 U | - |
| Indeno(1,2,3-cd)pyrene | mg/l | 0.1 | - | 0.0020 U | - | 0.0020 U | - |
| Isophorone | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| 2-Methylnaphthalene | mg/l | 20 | - | 0.0020 U | - | 0.0020 U | - |
| Naphthalene | mg/l | 20 | - | 0.0020 U | - | 0.0020 U | - |
| Nitrobenzene | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| N-Nitroso-di-n-propylamine | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| N-Nitrosodiphenylamine | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| Phenanthrene | mg/l | 10 | - | 0.0020 U | - | 0.0020 U | - |
| Pyrene | mg/l | 0.02 | - | 0.0020 U | - | 0.0020 U | - |
| 1,2,4-Trichlorobenzene | mg/l | 50 | - | 0.0050 U | - | 0.0050 U | - |
| **GC Semi-volatiles (SW846 8082)** | | | | | | | |
| Aroclor 1016 | mg/l | 0.01 | - | 0.00033 U | - | 0.00032 U | - |
| Aroclor 1221 | mg/l | 0.01 | - | 0.00033 U | - | 0.00032 U | - |
| Aroclor 1232 | mg/l | 0.01 | - | 0.00033 U | - | 0.00032 U | - |
| Aroclor 1242 | mg/l | 0.01 | - | 0.00033 U | - | 0.00032 U | - |
| Aroclor 1248 | mg/l | 0.01 | - | 0.00033 U | - | 0.00032 U | - |
| Aroclor 1254 | mg/l | 0.01 | - | 0.00033 U | - | 0.00032 U | - |
| Aroclor 1260 | mg/l | 0.01 | - | 0.00033 U | - | 0.00032 U | - |
| Aroclor 1262 | mg/l | 0.01 | - | 0.00033 U | - | 0.00032 U | - |
| Aroclor 1268 | mg/l | 0.01 | - | 0.00033 U | - | 0.00032 U | - |
| **GC Semi-volatiles (SW846-8015)** | | | | | | | |
| TPH-DRO (Semi-VOA) | mg/l | - | - | 0.25 U | - | 0.22 U | - |
| **Metals Analysis** | | | | | | | |
| Antimony | mg/l | 8 | 0.0060 U | - | 0.0060 U | - | 0.0060 U |
| Arsenic | mg/l | 0.9 | 0.0040 U | - | 0.0040 U | - | 0.0040 U |
| Beryllium | mg/l | 0.2 | 0.0040 U | - | 0.0040 U | - | 0.0040 U |
| Cadmium | mg/l | 0.004 | 0.0040 U | - | 0.0040 U | - | 0.0040 U |
| Chromium | mg/l | 0.3 | 0.010 U | - | 0.010 U | - | 0.010 U |
| Copper | mg/l | - | 0.025 U | - | 0.025 U | - | 0.025 U |
| Lead | mg/l | 0.01 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Mercury | mg/l | 0.02 | 0.00020 U | - | 0.00020 U | - | 0.00020 U |
| Nickel | mg/l | 0.2 | 0.040 U | - | 0.040 U | - | 0.040 U |
| Selenium | mg/l | 0.1 | 0.010 U | - | 0.010 U | - | 0.010 U |
| Silver | mg/l | 0.007 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Thallium | mg/l | 3 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Zinc | mg/l | 0.9 | 0.0348 | - | 0.0955 | - | 0.098 |

**Regulatory limits listed in this document have been obtained from the latest version of the regulations cited and are used for advisory purposes only. Accutest assumes no responsibility for errors in regulatory documents or changes to criteria detailed in later versions of the referenced regulation. It is the responsibility of the user to verify these limits before using or reporting any data.**

**No results exceeded regulatory criteria.**

| Accutest Labs of New England, Inc. | | | | | | | 8/22/2014 12:10 |
|---|---|---|---|---|---|---|---|
| **Job Number:** | MC27810 | | | | | | |
| **Account:** | Apex Companies, LLC | | | | | | |
| **Project:** | NBMCT, Blackmer, New Bedford, MA | | | | | | |
| **Project Number:** | 6690.027 | | | | | | |
| | | | | | Legend: | Hit | Exceed |

| Client Sample ID: | | MA MCP Method 1: GW-3 Standard (310 CMR 6/14) | MW-1 | MW-1 | MW-2 | MW-2 | MW-3 |
|---|---|---|---|---|---|---|---|
| Lab Sample ID: | | | MC27810-1 | MC27810-1F | MC27810-2 | MC27810-2F | MC27810-3 |
| Date Sampled: | | | 1/21/2014 | 1/21/2014 | 1/21/2014 | 1/21/2014 | 1/21/2014 |
| Matrix: | | | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water |
| **GC/MS Semi-volatiles (SW846 8270D)** | | | | | | | |
| Benzoic Acid | mg/l | - | 0.010 U | - | 0.010 U | - | 0.010 U |
| 2-Chlorophenol | mg/l | 7 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 4-Chloro-3-methyl phenol | mg/l | - | 0.010 U | - | 0.010 U | - | 0.010 U |
| 2,4-Dichlorophenol | mg/l | 2 | 0.010 U | - | 0.010 U | - | 0.010 U |
| 2,4-Dimethylphenol | mg/l | 50 | 0.010 U | - | 0.010 U | - | 0.010 U |
| 2,4-Dinitrophenol | mg/l | 20 | 0.020 U | - | 0.020 U | - | 0.020 U |
| 2-Methylphenol | mg/l | - | 0.010 U | - | 0.010 U | - | 0.010 U |
| 3&4-Methylphenol | mg/l | - | 0.010 U | - | 0.010 U | - | 0.010 U |
| 2-Nitrophenol | mg/l | - | 0.010 U | - | 0.010 U | - | 0.010 U |
| 4-Nitrophenol | mg/l | - | 0.020 U | - | 0.020 U | - | 0.020 U |
| Pentachlorophenol | mg/l | 0.2 | 0.010 U | - | 0.010 U | - | 0.010 U |
| Phenol | mg/l | 2 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 2,4,5-Trichlorophenol | mg/l | 3 | 0.010 U | - | 0.010 U | - | 0.010 U |
| 2,4,6-Trichlorophenol | mg/l | 0.5 | 0.010 U | - | 0.010 U | - | 0.010 U |
| Acenaphthene | mg/l | 10 | 0.0020 U | - | 0.0020 U | - | 0.0020 U |
| Acenaphthylene | mg/l | 0.04 | 0.0020 U | - | 0.0020 U | - | 0.0020 U |
| Acetophenone | mg/l | - | 0.010 U | - | 0.010 U | - | 0.010 U |
| Aniline | mg/l | - | 0.010 U | - | 0.010 U | - | 0.010 U |
| Anthracene | mg/l | 0.03 | 0.0020 U | - | 0.0020 U | - | 0.0020 U |
| Benzo(a)anthracene | mg/l | 1 | 0.0020 U | - | 0.0020 U | - | 0.0045 |
| Benzo(a)pyrene | mg/l | 0.5 | 0.0020 U | - | 0.0020 U | - | 0.0043 |
| Benzo(b)fluoranthene | mg/l | 0.4 | 0.0020 U | - | 0.0020 U | - | 0.0036 |
| Benzo(g,h,i)perylene | mg/l | 0.02 | 0.0020 U | - | 0.0020 U | - | 0.0027 |
| Benzo(k)fluoranthene | mg/l | 0.1 | 0.0020 U | - | 0.0020 U | - | 0.0035 |
| 4-Bromophenyl phenyl ether | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Butyl benzyl phthalate | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 2-Chloronaphthalene | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 4-Chloroaniline | mg/l | 0.3 | 0.010 U | - | 0.010 U | - | 0.010 U |
| Chrysene | mg/l | 0.07 | 0.0020 U | - | 0.0020 U | - | 0.004 |
| bis(2-Chloroethoxy)methane | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| bis(2-Chloroethyl)ether | mg/l | 50 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| bis(2-Chloroisopropyl)ether | mg/l | 50 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 1,2-Dichlorobenzene | mg/l | 2 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 1,2-Diphenylhydrazine | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 1,3-Dichlorobenzene | mg/l | 50 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 1,4-Dichlorobenzene | mg/l | 8 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 2,4-Dinitrotoluene | mg/l | 50 | 0.010 U | - | 0.010 U | - | 0.010 U |
| 2,6-Dinitrotoluene | mg/l | - | 0.010 U | - | 0.010 U | - | 0.010 U |
| 3,3'-Dichlorobenzidine | mg/l | 2 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Dibenzo(a,h)anthracene | mg/l | 0.04 | 0.0020 U | - | 0.0020 U | - | 0.0020 U |
| Dibenzofuran | mg/l | - | 0.0020 U | - | 0.0020 U | - | 0.0020 U |
| Di-n-butyl phthalate | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Di-n-octyl phthalate | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Diethyl phthalate | mg/l | 9 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Dimethyl phthalate | mg/l | 50 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| bis(2-Ethylhexyl)phthalate | mg/l | 50 | 0.0020 U | - | 0.0020 U | - | 0.0020 U |
| Fluoranthene | mg/l | 0.2 | 0.0020 U | - | 0.0020 U | - | 0.0099 |
| Fluorene | mg/l | 0.04 | 0.0020 U | - | 0.0020 U | - | 0.0020 U |
| Hexachlorobenzene | mg/l | 6 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Hexachlorobutadiene | mg/l | 3 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Hexachlorocyclopentadiene | mg/l | - | 0.010 U | - | 0.010 U | - | 0.010 U |
| Hexachloroethane | mg/l | 50 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Indeno(1,2,3-cd)pyrene | mg/l | 0.1 | 0.0020 U | - | 0.0020 U | - | 0.0025 |
| Isophorone | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| 2-Methylnaphthalene | mg/l | 20 | 0.0020 U | - | 0.0020 U | - | 0.0020 U |
| Naphthalene | mg/l | 20 | 0.0020 U | - | 0.0020 U | - | 0.0020 U |
| Nitrobenzene | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| N-Nitroso-di-n-propylamine | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| N-Nitrosodiphenylamine | mg/l | - | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Phenanthrene | mg/l | 10 | 0.0020 U | - | 0.0020 U | - | 0.0042 |
| Pyrene | mg/l | 0.02 | 0.0020 U | - | 0.0020 U | - | 0.0092 |
| 1,2,4-Trichlorobenzene | mg/l | 50 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| **GC Semi-volatiles (SW846 8082)** | | | | | | | |
| Aroclor 1016 | mg/l | 0.01 | 0.00027 U | - | 0.00031 U | - | 0.00030 U |
| Aroclor 1221 | mg/l | 0.01 | 0.00027 U | - | 0.00031 U | - | 0.00030 U |
| Aroclor 1232 | mg/l | 0.01 | 0.00027 U | - | 0.00031 U | - | 0.00030 U |
| Aroclor 1242 | mg/l | 0.01 | 0.00027 U | - | 0.00031 U | - | 0.00030 U |
| Aroclor 1248 | mg/l | 0.01 | 0.00027 U | - | 0.00031 U | - | 0.00030 U |
| Aroclor 1254 | mg/l | 0.01 | 0.0022 | - | 0.00031 U | - | 0.00030 U |
| Aroclor 1260 | mg/l | 0.01 | 0.00027 U | - | 0.00031 U | - | 0.00030 U |
| Aroclor 1262 | mg/l | 0.01 | 0.00027 U | - | 0.00031 U | - | 0.00030 U |
| Aroclor 1268 | mg/l | 0.01 | 0.00027 U | - | 0.00031 U | - | 0.00030 U |
| **GC Semi-volatiles (SW846-8015)** | | | | | | | |
| TPH-DRO (Semi-VOA) | mg/l | - | 0.24 U | - | 0.24 U | - | 0.26 U |
| **Metals Analysis** | | | | | | | |
| Antimony | mg/l | 8 | - | 0.0060 U | - | 0.0060 U | - |
| Arsenic | mg/l | 0.9 | - | 0.0040 U | - | 0.0040 U | - |
| Beryllium | mg/l | 0.2 | - | 0.0040 U | - | 0.0040 U | - |
| Cadmium | mg/l | 0.004 | - | 0.0040 U | - | 0.0040 U | - |
| Chromium | mg/l | 0.3 | - | 0.010 U | - | 0.010 U | - |
| Copper | mg/l | - | - | 0.025 U | - | 0.025 U | - |
| Lead | mg/l | 0.01 | - | 0.0050 U | - | 0.0050 U | - |
| Mercury | mg/l | 0.02 | - | 0.00020 U | - | 0.00020 U | - |
| Nickel | mg/l | 0.2 | - | 0.040 U | - | 0.040 U | - |
| Selenium | mg/l | 0.1 | - | 0.010 U | - | 0.010 U | - |
| Silver | mg/l | 0.007 | - | 0.0050 U | - | 0.0050 U | - |
| Thallium | mg/l | 3 | - | 0.0050 U | - | 0.0050 U | - |
| Zinc | mg/l | 0.9 | - | 0.020 U | - | 0.020 U | - |

| Client Sample ID: | | MA MCP Method | MW-3 | MW-5 | MW-5 | DUP-C-W-100 | DUP-C-W-100 |
|---|---|---|---|---|---|---|---|
| Lab Sample ID: | | 1: GW-3 | MC27810-3F | MC27810-4 | MC27810-4F | MC27810-5 | MC27810-5F |
| Date Sampled: | | Standard (310 | 1/21/2014 | 1/21/2014 | 1/21/2014 | 1/21/2014 | 1/21/2014 |
| Matrix: | | CMR 6/14) | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water |
| **GC/MS Semi-volatiles (SW846 8270D)** | | | | | | | |
| Benzoic Acid | mg/l | - | - | 0.010 U | - | 0.010 U | - |
| 2-Chlorophenol | mg/l | 7 | - | 0.0050 U | - | 0.0050 U | - |
| 4-Chloro-3-methyl phenol | mg/l | - | - | 0.010 U | - | 0.010 U | - |
| 2,4-Dichlorophenol | mg/l | 2 | - | 0.010 U | - | 0.010 U | - |
| 2,4-Dimethylphenol | mg/l | 50 | - | 0.010 U | - | 0.010 U | - |
| 2,4-Dinitrophenol | mg/l | 20 | - | 0.020 U | - | 0.020 U | - |
| 2-Methylphenol | mg/l | - | - | 0.010 U | - | 0.010 U | - |
| 3&4-Methylphenol | mg/l | - | - | 0.010 U | - | 0.010 U | - |
| 2-Nitrophenol | mg/l | - | - | 0.010 U | - | 0.010 U | - |
| 4-Nitrophenol | mg/l | - | - | 0.020 U | - | 0.020 U | - |
| Pentachlorophenol | mg/l | 0.2 | - | 0.010 U | - | 0.010 U | - |
| Phenol | mg/l | 2 | - | 0.0050 U | - | 0.0050 U | - |
| 2,4,5-Trichlorophenol | mg/l | 3 | - | 0.010 U | - | 0.010 U | - |
| 2,4,6-Trichlorophenol | mg/l | 0.5 | - | 0.010 U | - | 0.010 U | - |
| Acenaphthene | mg/l | 10 | - | 0.0020 U | - | 0.0020 U | - |
| Acenaphthylene | mg/l | 0.04 | - | 0.0020 U | - | 0.0020 U | - |
| Acetophenone | mg/l | - | - | 0.010 U | - | 0.010 U | - |
| Aniline | mg/l | - | - | 0.010 U | - | 0.010 U | - |
| Anthracene | mg/l | 0.03 | - | 0.0020 U | - | 0.0020 U | - |
| Benzo(a)anthracene | mg/l | 1 | - | 0.0020 U | - | 0.0020 U | - |
| Benzo(a)pyrene | mg/l | 0.5 | - | 0.0020 U | - | 0.0020 U | - |
| Benzo(b)fluoranthene | mg/l | 0.4 | - | 0.0020 U | - | 0.0020 U | - |
| Benzo(g,h,i)perylene | mg/l | 0.02 | - | 0.0020 U | - | 0.0020 U | - |
| Benzo(k)fluoranthene | mg/l | 0.1 | - | 0.0020 U | - | 0.0020 U | - |
| 4-Bromophenyl phenyl ether | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| Butyl benzyl phthalate | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| 2-Chloronaphthalene | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| 4-Chloroaniline | mg/l | 0.3 | - | 0.010 U | - | 0.010 U | - |
| Chrysene | mg/l | 0.07 | - | 0.0020 U | - | 0.0020 U | - |
| bis(2-Chloroethoxy)methane | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| bis(2-Chloroethyl)ether | mg/l | 50 | - | 0.0050 U | - | 0.0050 U | - |
| bis(2-Chloroisopropyl)ether | mg/l | 50 | - | 0.0050 U | - | 0.0050 U | - |
| 1,2-Dichlorobenzene | mg/l | 2 | - | 0.0050 U | - | 0.0050 U | - |
| 1,2-Diphenylhydrazine | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| 1,3-Dichlorobenzene | mg/l | 50 | - | 0.0050 U | - | 0.0050 U | - |
| 1,4-Dichlorobenzene | mg/l | 8 | - | 0.0050 U | - | 0.0050 U | - |
| 2,4-Dinitrotoluene | mg/l | 50 | - | 0.010 U | - | 0.010 U | - |
| 2,6-Dinitrotoluene | mg/l | - | - | 0.010 U | - | 0.010 U | - |
| 3,3'-Dichlorobenzidine | mg/l | 2 | - | 0.0050 U | - | 0.0050 U | - |
| Dibenzo(a,h)anthracene | mg/l | 0.04 | - | 0.0020 U | - | 0.0020 U | - |
| Dibenzofuran | mg/l | - | - | 0.0020 U | - | 0.0020 U | - |
| Di-n-butyl phthalate | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| Di-n-octyl phthalate | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| Diethyl phthalate | mg/l | 9 | - | 0.0050 U | - | 0.0050 U | - |
| Dimethyl phthalate | mg/l | 50 | - | 0.0050 U | - | 0.0050 U | - |
| bis(2-Ethylhexyl)phthalate | mg/l | 50 | - | 0.0020 U | - | 0.0020 U | - |
| Fluoranthene | mg/l | 0.2 | - | 0.0020 U | - | 0.0020 U | - |
| Fluorene | mg/l | 0.04 | - | 0.0020 U | - | 0.0020 U | - |
| Hexachlorobenzene | mg/l | 6 | - | 0.0050 U | - | 0.0050 U | - |
| Hexachlorobutadiene | mg/l | 3 | - | 0.0050 U | - | 0.0050 U | - |
| Hexachlorocyclopentadiene | mg/l | - | - | 0.010 U | - | 0.010 U | - |
| Hexachloroethane | mg/l | 50 | - | 0.0050 U | - | 0.0050 U | - |
| Indeno(1,2,3-cd)pyrene | mg/l | 0.1 | - | 0.0020 U | - | 0.0020 U | - |
| Isophorone | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| 2-Methylnaphthalene | mg/l | 20 | - | 0.0020 U | - | 0.0020 U | - |
| Naphthalene | mg/l | 20 | - | 0.0020 U | - | 0.0020 U | - |
| Nitrobenzene | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| N-Nitroso-di-n-propylamine | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| N-Nitrosodiphenylamine | mg/l | - | - | 0.0050 U | - | 0.0050 U | - |
| Phenanthrene | mg/l | 10 | - | 0.0020 U | - | 0.0020 U | - |
| Pyrene | mg/l | 0.02 | - | 0.0020 U | - | 0.0020 U | - |
| 1,2,4-Trichlorobenzene | mg/l | 50 | - | 0.0050 U | - | 0.0050 U | - |
| **GC Semi-volatiles (SW846 8082)** | | | | | | | |
| Aroclor 1016 | mg/l | 0.01 | - | 0.00033 U | - | 0.00032 U | - |
| Aroclor 1221 | mg/l | 0.01 | - | 0.00033 U | - | 0.00032 U | - |
| Aroclor 1232 | mg/l | 0.01 | - | 0.00033 U | - | 0.00032 U | - |
| Aroclor 1242 | mg/l | 0.01 | - | 0.00033 U | - | 0.00032 U | - |
| Aroclor 1248 | mg/l | 0.01 | - | 0.00033 U | - | 0.00032 U | - |
| Aroclor 1254 | mg/l | 0.01 | - | 0.00033 U | - | 0.00032 U | - |
| Aroclor 1260 | mg/l | 0.01 | - | 0.00033 U | - | 0.00032 U | - |
| Aroclor 1262 | mg/l | 0.01 | - | 0.00033 U | - | 0.00032 U | - |
| Aroclor 1268 | mg/l | 0.01 | - | 0.00033 U | - | 0.00032 U | - |
| **GC Semi-volatiles (SW846-8015)** | | | | | | | |
| TPH-DRO (Semi-VOA) | mg/l | - | - | 0.25 U | - | 0.22 U | - |
| **Metals Analysis** | | | | | | | |
| Antimony | mg/l | 8 | 0.0060 U | - | 0.0060 U | - | 0.0060 U |
| Arsenic | mg/l | 0.9 | 0.0040 U | - | 0.0040 U | - | 0.0040 U |
| Beryllium | mg/l | 0.2 | 0.0040 U | - | 0.0040 U | - | 0.0040 U |
| Cadmium | mg/l | 0.004 | 0.0040 U | - | 0.0040 U | - | 0.0040 U |
| Chromium | mg/l | 0.3 | 0.010 U | - | 0.010 U | - | 0.010 U |
| Copper | mg/l | - | 0.025 U | - | 0.025 U | - | 0.025 U |
| Lead | mg/l | 0.01 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Mercury | mg/l | 0.02 | 0.00020 U | - | 0.00020 U | - | 0.00020 U |
| Nickel | mg/l | 0.2 | 0.040 U | - | 0.040 U | - | 0.040 U |
| Selenium | mg/l | 0.1 | 0.010 U | - | 0.010 U | - | 0.010 U |
| Silver | mg/l | 0.007 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Thallium | mg/l | 3 | 0.0050 U | - | 0.0050 U | - | 0.0050 U |
| Zinc | mg/l | 0.9 | 0.0348 | - | 0.0955 | - | 0.098 |

**Regulatory limits listed in this document have been obtained from the latest version of the regulations cited and are used for advisory purposes only. Accutest assumes no responsibility for errors in regulatory documents or changes to criteria detailed in later versions of the referenced regulation. It is the responsibility of the user to verify these limits before using or reporting any data.**

**No results exceeded regulatory criteria.**

# TABLE 2

**Summary of Analytical Soil Data from DGA-10**
**Soil Analytical - PCBs**
**5x5 Grids**
2/4/2014

Legend: Red = Exceeds 50 ppm | Green = Above MCP S1/GW-1 Criteria.

| LOCATION | | | DGA-10 SB-G3 1' | | DGA-10 SB-G3 2' | | DGA-10 SB-G3 3' | | DGA-10 SB-G3 4' | | DGA-10 SB-G3 5' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402874-01 | | L1402874-02 | | L1402874-03 | | L1402874-04 | | L1402874-05 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 3.93 | U | 7.41 | U | 0.0423 | U | 0.0375 | U | 0.0354 | U |
| Aroclor 1221 | 2 | mg/kg | 3.93 | U | 7.41 | U | 0.0423 | U | 0.0375 | U | 0.0354 | U |
| Aroclor 1232 | 2 | mg/kg | 3.93 | U | 7.41 | U | 0.0423 | U | 0.0375 | U | 0.0354 | U |
| Aroclor 1242 | 2 | mg/kg | 3.93 | U | 7.41 | U | 0.0423 | U | 0.0375 | U | 0.0354 | U |
| Aroclor 1248 | 2 | mg/kg | 3.93 | U | 7.41 | U | 0.0423 | U | 0.0375 | U | 0.0354 | U |
| Aroclor 1254 | 2 | mg/kg | 38 | | 83.8 | | 0.0423 | U | 0.0375 | U | 0.0354 | U |
| Aroclor 1260 | 2 | mg/kg | 3.93 | U | 7.41 | U | 0.0423 | U | 0.0375 | U | 0.0354 | U |
| Aroclor 1262 | 2 | mg/kg | 3.93 | U | 7.41 | U | 0.0423 | U | 0.0375 | U | 0.0354 | U |
| Aroclor 1268 | 2 | mg/kg | 3.93 | U | 7.41 | U | 0.0423 | U | 0.0375 | U | 0.0354 | U |

| LOCATION | | | DGA-10 SB-G4 1' | | DGA-10 SB-G4 2' | | DGA-10 SB-G4 3' | | DGA-10 SB-G4 4' | | DGA-10 SB-G4 5' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402874-11 | | L1402874-12 | | L1402874-13 | | L1402874-14 | | L1402874-15 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 0.706 | U | 3.67 | U | 0.364 | U | 0.189 | U | 0.038 | U |
| Aroclor 1221 | 2 | mg/kg | 0.706 | U | 3.67 | U | 0.364 | U | 0.189 | U | 0.038 | U |
| Aroclor 1232 | 2 | mg/kg | 0.706 | U | 3.67 | U | 0.364 | U | 0.189 | U | 0.038 | U |
| Aroclor 1242 | 2 | mg/kg | 0.706 | U | 3.67 | U | 0.364 | U | 0.189 | U | 0.038 | U |
| Aroclor 1248 | 2 | mg/kg | 0.706 | U | 3.67 | U | 0.364 | U | 0.189 | U | 0.038 | U |
| Aroclor 1254 | 2 | mg/kg | 3.91 | | 7.13 | | 3.36 | | 0.74 | | 0.3 | |
| Aroclor 1260 | 2 | mg/kg | 0.706 | U | 3.67 | U | 0.364 | U | 0.189 | U | 0.038 | U |
| Aroclor 1262 | 2 | mg/kg | 0.706 | U | 3.67 | U | 0.364 | U | 0.189 | U | 0.038 | U |
| Aroclor 1268 | 2 | mg/kg | 0.706 | U | 3.67 | U | 0.364 | U | 0.189 | U | 0.038 | U |

| LOCATION | | | DGA-10SB-H5 1' | | DGA-10SB-H5 2' | | DGA-10SB-H5 3' | | DGA-10SB-H5 4' | | DGA-10SB-H5 5' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402874-17 | | L1402874-18 | | L1402874-19 | | L1402874-20 | | L1402874-21 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 21.1 | U | 3.92 | U | 1.77 | U | 0.199 | U | 0.0844 | U |
| Aroclor 1221 | 2 | mg/kg | 21.1 | U | 3.92 | U | 1.77 | U | 0.199 | U | 0.0844 | U |
| Aroclor 1232 | 2 | mg/kg | 21.1 | U | 3.92 | U | 1.77 | U | 0.199 | U | 0.0844 | U |
| Aroclor 1242 | 2 | mg/kg | 21.1 | U | 3.92 | U | 1.77 | U | 0.199 | U | 0.0844 | U |
| Aroclor 1248 | 2 | mg/kg | 21.1 | U | 3.92 | U | 1.77 | U | 0.199 | U | 0.0844 | U |
| Aroclor 1254 | 2 | mg/kg | 184 | | 11 | | 7.72 | | 1.11 | | 0.7 | |
| Aroclor 1260 | 2 | mg/kg | 21.1 | U | 3.92 | U | 1.77 | U | 0.199 | U | 0.0844 | U |
| Aroclor 1262 | 2 | mg/kg | 21.1 | U | 3.92 | U | 1.77 | U | 0.199 | U | 0.0844 | U |
| Aroclor 1268 | 2 | mg/kg | 21.1 | U | 3.92 | U | 1.77 | U | 0.199 | U | 0.0844 | U |

| LOCATION | | | DGA-10 SB-G6 1' | | DGA-10 SB-G6 2' | | DGA-10 SB-G6 3' | | DGA-10 SB-G6 4' | | DGA-10 SB-G6 5' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402874-23 | | L1402874-24 | | L1402874-25 | | L1402874-26 | | L1402874-27 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 18.1 | U | 3.66 | U | 0.187 | U | 0.0363 | U | 0.0413 | U |
| Aroclor 1221 | 2 | mg/kg | 18.1 | U | 3.66 | U | 0.187 | U | 0.0363 | U | 0.0413 | U |
| Aroclor 1232 | 2 | mg/kg | 18.1 | U | 3.66 | U | 0.187 | U | 0.0363 | U | 0.0413 | U |
| Aroclor 1242 | 2 | mg/kg | 18.1 | U | 3.66 | U | 0.187 | U | 0.0363 | U | 0.0413 | U |
| Aroclor 1248 | 2 | mg/kg | 18.1 | U | 3.66 | U | 0.187 | U | 0.0363 | U | 0.0413 | U |
| Aroclor 1254 | 2 | mg/kg | 188 | | 33.4 | | 1.56 | | 0.0752 | | 0.12 | |
| Aroclor 1260 | 2 | mg/kg | 18.1 | U | 3.66 | U | 0.187 | U | 0.0363 | U | 0.0413 | U |
| Aroclor 1262 | 2 | mg/kg | 18.1 | U | 3.66 | U | 0.187 | U | 0.0363 | U | 0.0413 | U |
| Aroclor 1268 | 2 | mg/kg | 18.1 | U | 3.66 | U | 0.187 | U | 0.0363 | U | 0.0413 | U |

| LOCATION | | | DGA-10 SB-G5 1' | | DGA-10 SB-G5 2' | | DGA-10 SB-G5 3' | | DGA-10 SB-G5 4' | | DGA-10 SB-G5 5' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402875-01 | | L1402875-02 | | L1402875-03 | | L1402875-04 | | L1402875-05 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 4.57 | U | 3.57 | U | 0.716 | U | 0.0746 | U | 0.0385 | U |
| Aroclor 1221 | 2 | mg/kg | 4.57 | U | 3.57 | U | 0.716 | U | 0.0746 | U | 0.0385 | U |
| Aroclor 1232 | 2 | mg/kg | 4.57 | U | 3.57 | U | 0.716 | U | 0.0746 | U | 0.0385 | U |
| Aroclor 1242 | 2 | mg/kg | 4.57 | U | 3.57 | U | 0.716 | U | 0.0746 | U | 0.0385 | U |
| Aroclor 1248 | 2 | mg/kg | 4.57 | U | 3.57 | U | 0.716 | U | 0.0746 | U | 0.0385 | U |
| Aroclor 1254 | 2 | mg/kg | 13.5 | | 36 | | 4.19 | | 0.239 | | 0.0638 | |
| Aroclor 1260 | 2 | mg/kg | 4.57 | U | 3.57 | U | 0.716 | U | 0.0746 | U | 0.0385 | U |
| Aroclor 1262 | 2 | mg/kg | 4.57 | U | 3.57 | U | 0.716 | U | 0.0746 | U | 0.0385 | U |
| Aroclor 1268 | 2 | mg/kg | 4.57 | U | 3.57 | U | 0.716 | U | 0.0746 | U | 0.0385 | U |

| LOCATION | | | DGA-10 SB-F5 1' | | DGA-10 SB-F5 2' | | DGA-10 SB-F5 3' | | DGA-10 SB-F5 4' | | DGA-10 SB-F6 1' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402875-07 | | L1402875-08 | | L1402875-09 | | L1402875-10 | | L1402875-11 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 0.0726 | U | 0.0385 | U | 0.0354 | U | 0.0334 | U | 0.0358 | U |
| Aroclor 1221 | 2 | mg/kg | 0.0726 | U | 0.0385 | U | 0.0354 | U | 0.0334 | U | 0.0358 | U |
| Aroclor 1232 | 2 | mg/kg | 0.0726 | U | 0.0385 | U | 0.0354 | U | 0.0334 | U | 0.0358 | U |
| Aroclor 1242 | 2 | mg/kg | 0.0726 | U | 0.0385 | U | 0.0354 | U | 0.0334 | U | 0.0358 | U |
| Aroclor 1248 | 2 | mg/kg | 0.0726 | U | 0.0385 | U | 0.0354 | U | 0.0334 | U | 0.0358 | U |
| Aroclor 1254 | 2 | mg/kg | 0.749 | | 0.0385 | U | 0.0354 | U | 0.0334 | U | 0.128 | |
| Aroclor 1260 | 2 | mg/kg | 0.0726 | U | 0.0385 | U | 0.0354 | U | 0.0334 | U | 0.0358 | U |
| Aroclor 1262 | 2 | mg/kg | 0.0726 | U | 0.0385 | U | 0.0354 | U | 0.0334 | U | 0.0358 | U |
| Aroclor 1268 | 2 | mg/kg | 0.0726 | U | 0.0385 | U | 0.0354 | U | 0.0334 | U | 0.0358 | U |

| LOCATION | | | DGA-10 SB-F6 2' | | DGA-10 SB-F6 3' | | DGA-10 SB-F6 4' | | DGA-10 SB-F6 5' | | DGA-10 SB-E5 1' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402875-12 | | L1402875-13 | | L1402875-14 | | L1402875-15 | | L1402875-19 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 0.039 | U | 0.0355 | U | 0.033 | U | 0.0337 | U | 4.44 | U |
| Aroclor 1221 | 2 | mg/kg | 0.039 | U | 0.0355 | U | 0.033 | U | 0.0337 | U | 4.44 | U |
| Aroclor 1232 | 2 | mg/kg | 0.039 | U | 0.0355 | U | 0.033 | U | 0.0337 | U | 4.44 | U |
| Aroclor 1242 | 2 | mg/kg | 0.039 | U | 0.0355 | U | 0.033 | U | 0.0337 | U | 4.44 | U |
| Aroclor 1248 | 2 | mg/kg | 0.039 | U | 0.0355 | U | 0.033 | U | 0.0337 | U | 4.44 | U |
| Aroclor 1254 | 2 | mg/kg | 0.0551 | | 0.0835 | | 0.0424 | | 0.104 | | 46.7 | |
| Aroclor 1260 | 2 | mg/kg | 0.039 | U | 0.0355 | U | 0.033 | U | 0.0337 | U | 4.44 | U |
| Aroclor 1262 | 2 | mg/kg | 0.039 | U | 0.0355 | U | 0.033 | U | 0.0337 | U | 4.44 | U |
| Aroclor 1268 | 2 | mg/kg | 0.039 | U | 0.0355 | U | 0.033 | U | 0.0337 | U | 4.44 | U |

| LOCATION | | | DGA-10 SB-E5 2' | | DGA-10 SB-E5 3' | | DGA-10 SB-E5 4' | | DGA-10 SB-E5 5' | | DGA-10 SB-E6 1' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402875-20 | | L1402875-21 | | L1402875-22 | | L1402875-23 | | L1402876-01 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 0.363 | U | 0.0348 | U | 0.0367 | U | 0.0349 | U | 0.728 | U |
| Aroclor 1221 | 2 | mg/kg | 0.363 | U | 0.0348 | U | 0.0367 | U | 0.0349 | U | 0.728 | U |
| Aroclor 1232 | 2 | mg/kg | 0.363 | U | 0.0348 | U | 0.0367 | U | 0.0349 | U | 0.728 | U |
| Aroclor 1242 | 2 | mg/kg | 0.363 | U | 0.0348 | U | 0.0367 | U | 0.0349 | U | 0.728 | U |
| Aroclor 1248 | 2 | mg/kg | 0.363 | U | 0.0348 | U | 0.0367 | U | 0.0349 | U | 0.728 | U |
| Aroclor 1254 | 2 | mg/kg | 1.57 | | 0.0455 | | 0.0367 | U | 0.0349 | U | 4.08 | |
| Aroclor 1260 | 2 | mg/kg | 0.363 | U | 0.0348 | U | 0.0367 | U | 0.0349 | U | 0.728 | U |
| Aroclor 1262 | 2 | mg/kg | 0.363 | U | 0.0348 | U | 0.0367 | U | 0.0349 | U | 0.728 | U |
| Aroclor 1268 | 2 | mg/kg | 0.363 | U | 0.0348 | U | 0.0367 | U | 0.0349 | U | 0.728 | U |

| LOCATION | | | DGA-10 SB-E6 2' | | DGA-10 SB-E6 3' | | DGA-10 SB-E6 4' | | DGA-10 SB-E6 5' | | DGA-10 SB-D5 1' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402876-02 | | L1402876-03 | | L1402876-04 | | L1402876-05 | | L1402876-09 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 0.0386 | U | 0.0382 | U | 0.0376 | U | 0.0355 | U | 1330 | U |
| Aroclor 1221 | 2 | mg/kg | 0.0386 | U | 0.0382 | U | 0.0376 | U | 0.0355 | U | 1330 | U |
| Aroclor 1232 | 2 | mg/kg | 0.0386 | U | 0.0382 | U | 0.0376 | U | 0.0355 | U | 1330 | U |
| Aroclor 1242 | 2 | mg/kg | 0.0386 | U | 0.0382 | U | 0.0376 | U | 0.0355 | U | 1330 | U |
| Aroclor 1248 | 2 | mg/kg | 0.0386 | U | 0.0382 | U | 0.0376 | U | 0.0355 | U | 1330 | U |
| Aroclor 1254 | 2 | mg/kg | 0.0386 | U | 0.0382 | U | 0.0376 | U | 0.0355 | U | 13400 | |
| Aroclor 1260 | 2 | mg/kg | 0.0386 | U | 0.0382 | U | 0.0376 | U | 0.0355 | U | 1330 | U |
| Aroclor 1262 | 2 | mg/kg | 0.0386 | U | 0.0382 | U | 0.0376 | U | 0.0355 | U | 1330 | U |
| Aroclor 1268 | 2 | mg/kg | 0.0386 | U | 0.0382 | U | 0.0376 | U | 0.0355 | U | 1330 | U |

| LOCATION | | | DGA-10 SB-D5 2' | | DGA-10 SB-D5 3' | | DGA-10 SB-D5 4' | | DGA-10 SB-D5 5' | | DGA-10SB-C3 1' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402876-10 | | L1402876-11 | | L1402876-12 | | L1402876-13 | | L1402876-19 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 3.65 | U | 0.202 | U | 0.388 | U | 0.0371 | U | 9.91 | U |
| Aroclor 1221 | 2 | mg/kg | 3.65 | U | 0.202 | U | 0.388 | U | 0.0371 | U | 9.91 | U |
| Aroclor 1232 | 2 | mg/kg | 3.65 | U | 0.202 | U | 0.388 | U | 0.0371 | U | 9.91 | U |
| Aroclor 1242 | 2 | mg/kg | 3.65 | U | 0.202 | U | 0.388 | U | 0.0371 | U | 9.91 | U |
| Aroclor 1248 | 2 | mg/kg | 3.65 | U | 0.202 | U | 0.388 | U | 0.0371 | U | 9.91 | U |
| Aroclor 1254 | 2 | mg/kg | 22.2 | | 1.02 | | 4.52 | | 0.302 | | 109 | |
| Aroclor 1260 | 2 | mg/kg | 3.65 | U | 0.202 | U | 0.388 | U | 0.0371 | U | 9.91 | U |
| Aroclor 1262 | 2 | mg/kg | 3.65 | U | 0.202 | U | 0.388 | U | 0.0371 | U | 9.91 | U |
| Aroclor 1268 | 2 | mg/kg | 3.65 | U | 0.202 | U | 0.388 | U | 0.0371 | U | 9.91 | U |

| LOCATION | | | DGA-10SB-C3 2' | | DGA-10SB-C3 3' | | DGA-10SB-C3 4' | | DGA-10SB-C3 5' | | DGA-10 SB-B3 1' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402876-20 | | L1402876-21 | | L1402876-22 | | L1402876-23 | | L1402876-27 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 39.5 | U | 0.385 | U | 0.0374 | U | 0.0373 | U | 26.3 | U |
| Aroclor 1221 | 2 | mg/kg | 39.5 | U | 0.385 | U | 0.0374 | U | 0.0373 | U | 26.3 | U |
| Aroclor 1232 | 2 | mg/kg | 39.5 | U | 0.385 | U | 0.0374 | U | 0.0373 | U | 26.3 | U |
| Aroclor 1242 | 2 | mg/kg | 39.5 | U | 0.385 | U | 0.0374 | U | 0.0373 | U | 26.3 | U |
| Aroclor 1248 | 2 | mg/kg | 39.5 | U | 0.385 | U | 0.0374 | U | 0.0373 | U | 26.3 | U |
| Aroclor 1254 | 2 | mg/kg | 396 | | 4.27 | | 0.344 | | 0.0763 | | 80 | |
| Aroclor 1260 | 2 | mg/kg | 39.5 | U | 0.385 | U | 0.0374 | U | 0.0373 | U | 26.3 | U |
| Aroclor 1262 | 2 | mg/kg | 39.5 | U | 0.385 | U | 0.0374 | U | 0.0373 | U | 26.3 | U |
| Aroclor 1268 | 2 | mg/kg | 39.5 | U | 0.385 | U | 0.0374 | U | 0.0373 | U | 26.3 | U |

| LOCATION | | | DGA-10 SB-B3 2' | | DGA-10 SB-B3 3' | | DGA-10 SB-B3 4' | | DGA-10 SB-B3 5' | | DGA-10 SB-A3 1' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402876-28 | | L1402876-29 | | L1402876-30 | | L1402876-31 | | L1402877-01 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 3.89 | U | 0.0764 | U | 0.0365 | U | 0.0368 | U | 20.8 | U |
| Aroclor 1221 | 2 | mg/kg | 3.89 | U | 0.0764 | U | 0.0365 | U | 0.0368 | U | 20.8 | U |
| Aroclor 1232 | 2 | mg/kg | 3.89 | U | 0.0764 | U | 0.0365 | U | 0.0368 | U | 20.8 | U |
| Aroclor 1242 | 2 | mg/kg | 3.89 | U | 0.0764 | U | 0.0365 | U | 0.0368 | U | 20.8 | U |
| Aroclor 1248 | 2 | mg/kg | 3.89 | U | 0.0764 | U | 0.0365 | U | 0.0368 | U | 20.8 | U |
| Aroclor 1254 | 2 | mg/kg | 12.7 | | 0.969 | | 0.0619 | | 0.0388 | | 139 | |
| Aroclor 1260 | 2 | mg/kg | 3.89 | U | 0.0764 | U | 0.0365 | U | 0.0368 | U | 20.8 | U |
| Aroclor 1262 | 2 | mg/kg | 3.89 | U | 0.0764 | U | 0.0365 | U | 0.0368 | U | 20.8 | U |
| Aroclor 1268 | 2 | mg/kg | 3.89 | U | 0.0764 | U | 0.0365 | U | 0.0368 | U | 20.8 | U |

| LOCATION | | | DGA-10 SB-A3 2' | | DGA-10 SB-A3 3' | | DGA-10 SB-A3 4' | | DGA-10 SB-A3 5' | | DGA-10 SB-A1 1' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402877-02 | | L1402877-03 | | L1402877-04 | | L1402877-05 | | L1402877-11 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 3.78 | U | 0.0376 | U | 0.037 | U | 0.0349 | U | 3.46 | U |
| Aroclor 1221 | 2 | mg/kg | 3.78 | U | 0.0376 | U | 0.037 | U | 0.0349 | U | 3.46 | U |
| Aroclor 1232 | 2 | mg/kg | 3.78 | U | 0.0376 | U | 0.037 | U | 0.0349 | U | 3.46 | U |
| Aroclor 1242 | 2 | mg/kg | 3.78 | U | 0.0376 | U | 0.037 | U | 0.0349 | U | 3.46 | U |
| Aroclor 1248 | 2 | mg/kg | 3.78 | U | 0.0376 | U | 0.037 | U | 0.0349 | U | 3.46 | U |
| Aroclor 1254 | 2 | mg/kg | 8.59 | | 0.132 | | 0.037 | U | 0.0462 | | 10.7 | |
| Aroclor 1260 | 2 | mg/kg | 3.78 | U | 0.0376 | U | 0.037 | U | 0.0349 | U | 3.46 | U |
| Aroclor 1262 | 2 | mg/kg | 3.78 | U | 0.0376 | U | 0.037 | U | 0.0349 | U | 3.46 | U |
| Aroclor 1268 | 2 | mg/kg | 3.78 | U | 0.0376 | U | 0.037 | U | 0.0349 | U | 3.46 | U |

| LOCATION | | | DGA-10 SB-A1 2' | | DGA-10 SB-A1 3' | | DGA-10 SB-A1 4' | | DGA-10 SB-A1 5' | | DGA-10 SB-FFF102 1' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402877-12 | | L1402877-13 | | L1402877-14 | | L1402877-15 | | L1402877-18 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 0.721 | U | 0.0687 | U | 0.0684 | U | 0.0724 | U | 0.152 | U |
| Aroclor 1221 | 2 | mg/kg | 0.721 | U | 0.0687 | U | 0.0684 | U | 0.0724 | U | 0.152 | U |
| Aroclor 1232 | 2 | mg/kg | 0.721 | U | 0.0687 | U | 0.0684 | U | 0.0724 | U | 0.152 | U |
| Aroclor 1242 | 2 | mg/kg | 0.721 | U | 0.0687 | U | 0.0684 | U | 0.0724 | U | 0.152 | U |
| Aroclor 1248 | 2 | mg/kg | 0.721 | U | 0.0687 | U | 0.0684 | U | 0.0724 | U | 0.152 | U |
| Aroclor 1254 | 2 | mg/kg | 3.97 | | 0.282 | | 0.129 | | 0.175 | | 1.75 | |
| Aroclor 1260 | 2 | mg/kg | 0.721 | U | 0.0687 | U | 0.0684 | U | 0.0724 | U | 0.152 | U |
| Aroclor 1262 | 2 | mg/kg | 0.721 | U | 0.0687 | U | 0.0684 | U | 0.0724 | U | 0.152 | U |
| Aroclor 1268 | 2 | mg/kg | 0.721 | U | 0.0687 | U | 0.0684 | U | 0.0724 | U | 0.152 | U |

| LOCATION | | | DGA-10 SB-FFF102 2' | | DGA-10 SB-FFF102 3' | | DGA-10 SB-FFF102 4' | | DGA-10 SB-FFF102 5' | | DGA-10 SB-PPP0 1' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402877-19 | | L1402877-20 | | L1402877-21 | | L1402877-22 | | L1402877-24 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 0.0664 | U | 0.175 | U | 0.177 | U | 0.171 | U | 2.34 | U |
| Aroclor 1221 | 2 | mg/kg | 0.0664 | U | 0.175 | U | 0.177 | U | 0.171 | U | 2.34 | U |
| Aroclor 1232 | 2 | mg/kg | 0.0664 | U | 0.175 | U | 0.177 | U | 0.171 | U | 2.34 | U |
| Aroclor 1242 | 2 | mg/kg | 0.0664 | U | 0.175 | U | 0.177 | U | 0.171 | U | 2.34 | U |
| Aroclor 1248 | 2 | mg/kg | 0.0664 | U | 0.175 | U | 0.177 | U | 0.171 | U | 2.34 | U |
| Aroclor 1254 | 2 | mg/kg | 0.935 | | 3.11 | | 0.925 | | 1.61 | | 9.17 | |
| Aroclor 1260 | 2 | mg/kg | 0.0664 | U | 0.175 | U | 0.177 | U | 0.171 | U | 2.34 | U |
| Aroclor 1262 | 2 | mg/kg | 0.0664 | U | 0.175 | U | 0.177 | U | 0.171 | U | 2.34 | U |
| Aroclor 1268 | 2 | mg/kg | 0.0664 | U | 0.175 | U | 0.177 | U | 0.171 | U | 2.34 | U |

| LOCATION | | | DGA-10 SB-PPP0 2' | | DGA-10 SB-PPP0 3' | | DGA-10 SB-PPP0 4' | | DGA-10 SB-PPP0 5' | | DGA-10 SB-WW7 1' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402877-25 | | L1402877-26 | | L1402877-27 | | L1402877-28 | | L1402878-01 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 0.736 | U | 0.173 | U | 0.172 | U | 0.0703 | U | 44.4 | U |
| Aroclor 1221 | 2 | mg/kg | 0.736 | U | 0.173 | U | 0.172 | U | 0.0703 | U | 44.4 | U |
| Aroclor 1232 | 2 | mg/kg | 0.736 | U | 0.173 | U | 0.172 | U | 0.0703 | U | 44.4 | U |
| Aroclor 1242 | 2 | mg/kg | 0.736 | U | 0.173 | U | 0.172 | U | 0.0703 | U | 44.4 | U |
| Aroclor 1248 | 2 | mg/kg | 0.736 | U | 0.173 | U | 0.172 | U | 0.0703 | U | 44.4 | U |
| Aroclor 1254 | 2 | mg/kg | 5.55 | | 1.08 | | 1.4 | | 0.387 | | 549 | |
| Aroclor 1260 | 2 | mg/kg | 0.736 | U | 0.173 | U | 0.172 | U | 0.0703 | U | 44.4 | U |
| Aroclor 1262 | 2 | mg/kg | 0.736 | U | 0.173 | U | 0.172 | U | 0.0703 | U | 44.4 | U |
| Aroclor 1268 | 2 | mg/kg | 0.736 | U | 0.173 | U | 0.172 | U | 0.0703 | U | 44.4 | U |

| LOCATION | | | DGA-10 SB-WW7 2' | | DGA-10 SB-WW7 3' | | DGA-10 SB-WW7 4' | | DGA-10 SB-WW7 5' | | DGA-10 SB-WW10 1' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402878-02 | | L1402878-03 | | L1402878-04 | | L1402878-05 | | L1402878-08 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 72.1 | U | 0.347 | U | 0.0339 | U | 0.0328 | U | 202 | U |
| Aroclor 1221 | 2 | mg/kg | 72.1 | U | 0.347 | U | 0.0339 | U | 0.0328 | U | 202 | U |
| Aroclor 1232 | 2 | mg/kg | 72.1 | U | 0.347 | U | 0.0339 | U | 0.0328 | U | 202 | U |
| Aroclor 1242 | 2 | mg/kg | 72.1 | U | 0.347 | U | 0.0339 | U | 0.0328 | U | 202 | U |
| Aroclor 1248 | 2 | mg/kg | 72.1 | U | 0.347 | U | 0.0339 | U | 0.0328 | U | 202 | U |
| Aroclor 1254 | 2 | mg/kg | 518 | | 1.05 | | 0.176 | | 0.117 | | 2880 | |
| Aroclor 1260 | 2 | mg/kg | 72.1 | U | 0.347 | U | 0.0339 | U | 0.0328 | U | 202 | U |
| Aroclor 1262 | 2 | mg/kg | 72.1 | U | 0.347 | U | 0.0339 | U | 0.0328 | U | 202 | U |
| Aroclor 1268 | 2 | mg/kg | 72.1 | U | 0.347 | U | 0.0339 | U | 0.0328 | U | 202 | U |

| LOCATION | | | DGA-10 SB-WW10 2' | | DGA-10 SB-WW10 3' | | DGA-10 SB-WW10 4' | | DGA-10 SB-WW10 5' | | DGA-10 SB-AAA10 1' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402878-09 | | L1402878-10 | | L1402878-11 | | L1402878-12 | | L1402878-15 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 3.63 | U | 0.334 | U | 0.331 | U | 0.184 | U | 39 | U |
| Aroclor 1221 | 2 | mg/kg | 3.63 | U | 0.334 | U | 0.331 | U | 0.184 | U | 39 | U |
| Aroclor 1232 | 2 | mg/kg | 3.63 | U | 0.334 | U | 0.331 | U | 0.184 | U | 39 | U |
| Aroclor 1242 | 2 | mg/kg | 3.63 | U | 0.334 | U | 0.331 | U | 0.184 | U | 39 | U |
| Aroclor 1248 | 2 | mg/kg | 3.63 | U | 0.334 | U | 0.331 | U | 0.184 | U | 39 | U |
| Aroclor 1254 | 2 | mg/kg | 20.7 | | 3.26 | | 1.03 | | 0.387 | | 381 | |
| Aroclor 1260 | 2 | mg/kg | 3.63 | U | 0.334 | U | 0.331 | U | 0.184 | U | 39 | U |
| Aroclor 1262 | 2 | mg/kg | 3.63 | U | 0.334 | U | 0.331 | U | 0.184 | U | 39 | U |
| Aroclor 1268 | 2 | mg/kg | 3.63 | U | 0.334 | U | 0.331 | U | 0.184 | U | 39 | U |

| LOCATION | | | DGA-10 SB-AAA10 2' | | DGA-10 SB-AAA10 3' | | DGA-10 SB-AAA10 4' | | DGA-10 SB-AAA10 5' | | DGA-10 SB-PPP8 1' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402878-16 | | L1402878-17 | | L1402878-18 | | L1402878-19 | | L1402881-01 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 4.01 | U | 0.177 | U | 0.0387 | U | 0.0369 | U | 4.38 | U |
| Aroclor 1221 | 2 | mg/kg | 4.01 | U | 0.177 | U | 0.0387 | U | 0.0369 | U | 4.38 | U |
| Aroclor 1232 | 2 | mg/kg | 4.01 | U | 0.177 | U | 0.0387 | U | 0.0369 | U | 4.38 | U |
| Aroclor 1242 | 2 | mg/kg | 4.01 | U | 0.177 | U | 0.0387 | U | 0.0369 | U | 4.38 | U |
| Aroclor 1248 | 2 | mg/kg | 4.01 | U | 0.177 | U | 0.0387 | U | 0.0369 | U | 4.38 | U |
| Aroclor 1254 | 2 | mg/kg | 44.3 | | 0.706 | | 0.152 | | 0.0648 | | 30 | |
| Aroclor 1260 | 2 | mg/kg | 4.01 | U | 0.177 | U | 0.0387 | U | 0.0369 | U | 4.38 | U |
| Aroclor 1262 | 2 | mg/kg | 4.01 | U | 0.177 | U | 0.0387 | U | 0.0369 | U | 4.38 | U |
| Aroclor 1268 | 2 | mg/kg | 4.01 | U | 0.177 | U | 0.0387 | U | 0.0369 | U | 4.38 | U |

| LOCATION | | | DGA-10 SB-PPP8 2' | | DGA-10 SB-PPP8 3' | | DGA-10 SB-PPP8 4' | | DGA-10 SB-PPP8 5' | | DGA-10 SB-TT3 1' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402881-02 | | L1402881-03 | | L1402881-04 | | L1402881-05 | | L1402881-09 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 3.61 | U | 0.358 | U | 0.0339 | U | 0.0352 | U | 4.42 | U |
| Aroclor 1221 | 2 | mg/kg | 3.61 | U | 0.358 | U | 0.0339 | U | 0.0352 | U | 4.42 | U |
| Aroclor 1232 | 2 | mg/kg | 3.61 | U | 0.358 | U | 0.0339 | U | 0.0352 | U | 4.42 | U |
| Aroclor 1242 | 2 | mg/kg | 3.61 | U | 0.358 | U | 0.0339 | U | 0.0352 | U | 4.42 | U |
| Aroclor 1248 | 2 | mg/kg | 3.61 | U | 0.358 | U | 0.0339 | U | 0.0352 | U | 4.42 | U |
| Aroclor 1254 | 2 | mg/kg | 6.36 | | 2.61 | | 0.0339 | U | 0.0352 | U | 52.7 | |
| Aroclor 1260 | 2 | mg/kg | 3.61 | U | 0.358 | U | 0.0339 | U | 0.0352 | U | 4.42 | U |
| Aroclor 1262 | 2 | mg/kg | 3.61 | U | 0.358 | U | 0.0339 | U | 0.0352 | U | 4.42 | U |
| Aroclor 1268 | 2 | mg/kg | 3.61 | U | 0.358 | U | 0.0339 | U | 0.0352 | U | 4.42 | U |

| LOCATION | | | DGA-10 SB-TT3 2' | | DGA-10 SB-TT3 3' | | DGA-10 SB-TT3 4' | | DGA-10 SB-TT3 5' | | DGA-10 SB-SS7 1' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402881-10 | | L1402881-11 | | L1402881-12 | | L1402881-13 | | L1402881-19 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 18 | U | 0.179 | U | 0.0367 | U | 0.036 | U | 3.89 | U |
| Aroclor 1221 | 2 | mg/kg | 18 | U | 0.179 | U | 0.0367 | U | 0.036 | U | 3.89 | U |
| Aroclor 1232 | 2 | mg/kg | 18 | U | 0.179 | U | 0.0367 | U | 0.036 | U | 3.89 | U |
| Aroclor 1242 | 2 | mg/kg | 18 | U | 0.179 | U | 0.0367 | U | 0.036 | U | 3.89 | U |
| Aroclor 1248 | 2 | mg/kg | 18 | U | 0.179 | U | 0.0367 | U | 0.036 | U | 3.89 | U |
| Aroclor 1254 | 2 | mg/kg | 120 | | 1.32 | | 0.245 | | 0.036 | U | 8.03 | |
| Aroclor 1260 | 2 | mg/kg | 18 | U | 0.179 | U | 0.0367 | U | 0.036 | U | 3.89 | U |
| Aroclor 1262 | 2 | mg/kg | 18 | U | 0.179 | U | 0.0367 | U | 0.036 | U | 3.89 | U |
| Aroclor 1268 | 2 | mg/kg | 18 | U | 0.179 | U | 0.0367 | U | 0.036 | U | 3.89 | U |

| LOCATION | | | DGA-10 SB-SS7 2' | | DGA-10 SB-SS7 3' | | DGA-10 SB-SS7 4' | | DGA-10 SB-SS7 5' | | DGA-10 SB-TT9 1' | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402881-20 | | L1402881-21 | | L1402881-22 | | L1402881-23 | | L1402881-26 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 0.0347 | U | 0.041 | U | 0.0384 | U | 0.0394 | U | 1570 | U |
| Aroclor 1221 | 2 | mg/kg | 0.0347 | U | 0.041 | U | 0.0384 | U | 0.0394 | U | 1570 | U |
| Aroclor 1232 | 2 | mg/kg | 0.0347 | U | 0.041 | U | 0.0384 | U | 0.0394 | U | 1570 | U |
| Aroclor 1242 | 2 | mg/kg | 0.0347 | U | 0.041 | U | 0.0384 | U | 0.0394 | U | 1570 | U |
| Aroclor 1248 | 2 | mg/kg | 0.0347 | U | 0.041 | U | 0.0384 | U | 0.0394 | U | 1570 | U |
| Aroclor 1254 | 2 | mg/kg | 0.164 | | 0.156 | | 0.072 | | 0.632 | | 21200 | |
| Aroclor 1260 | 2 | mg/kg | 0.0347 | U | 0.041 | U | 0.0384 | U | 0.0394 | U | 1570 | U |
| Aroclor 1262 | 2 | mg/kg | 0.0347 | U | 0.041 | U | 0.0384 | U | 0.0394 | U | 1570 | U |
| Aroclor 1268 | 2 | mg/kg | 0.0347 | U | 0.041 | U | 0.0384 | U | 0.0394 | U | 1570 | U |

| LOCATION | | | DGA-10 SB-TT9 2' | | DGA-10 SB-TT9 3' | | DGA-10 SB-TT9 4' | | DGA-10 SB-TT9 5' | |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402881-27 | | L1402881-28 | | L1402881-29 | | L1402881-30 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 3.66 | U | 0.384 | U | 0.37 | U | 0.352 | U |
| Aroclor 1221 | 2 | mg/kg | 3.66 | U | 0.384 | U | 0.37 | U | 0.352 | U |
| Aroclor 1232 | 2 | mg/kg | 3.66 | U | 0.384 | U | 0.37 | U | 0.352 | U |
| Aroclor 1242 | 2 | mg/kg | 3.66 | U | 0.384 | U | 0.37 | U | 0.352 | U |
| Aroclor 1248 | 2 | mg/kg | 3.66 | U | 0.384 | U | 0.37 | U | 0.352 | U |
| Aroclor 1254 | 2 | mg/kg | 47.2 | | 2.57 | | 2.02 | | 2.08 | |
| Aroclor 1260 | 2 | mg/kg | 3.66 | U | 0.384 | U | 0.37 | U | 0.352 | U |
| Aroclor 1262 | 2 | mg/kg | 3.66 | U | 0.384 | U | 0.37 | U | 0.352 | U |
| Aroclor 1268 | 2 | mg/kg | 3.66 | U | 0.384 | U | 0.37 | U | 0.352 | U |

| LOCATION | | | DUP 3050 | | DUP 3051 | | DUP 3052 | | DUP 3053 | | DUP 3054 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402873-01 | | L1402873-02 | | L1402873-03 | | L1402873-04 | | L1402873-05 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 0.0724 | U | 0.0407 | U | 0.0385 | U | 0.0363 | U | 4.06 | U |
| Aroclor 1221 | 2 | mg/kg | 0.0724 | U | 0.0407 | U | 0.0385 | U | 0.0363 | U | 4.06 | U |
| Aroclor 1232 | 2 | mg/kg | 0.0724 | U | 0.0407 | U | 0.0385 | U | 0.0363 | U | 4.06 | U |
| Aroclor 1242 | 2 | mg/kg | 0.0724 | U | 0.0407 | U | 0.0385 | U | 0.0363 | U | 4.06 | U |
| Aroclor 1248 | 2 | mg/kg | 0.0724 | U | 0.0407 | U | 0.0385 | U | 0.0363 | U | 4.06 | U |
| Aroclor 1254 | 2 | mg/kg | 0.457 | | 0.159 | | 0.0385 | U | 0.0363 | U | 12.7 | |
| Aroclor 1260 | 2 | mg/kg | 0.0724 | U | 0.0407 | U | 0.0385 | U | 0.0363 | U | 4.06 | U |
| Aroclor 1262 | 2 | mg/kg | 0.0724 | U | 0.0407 | U | 0.0385 | U | 0.0363 | U | 4.06 | U |
| Aroclor 1268 | 2 | mg/kg | 0.0724 | U | 0.0407 | U | 0.0385 | U | 0.0363 | U | 4.06 | U |

| LOCATION | | | DUP 3055 | | DUP 3056 | | DUP 3060 | | DUP 3058 | | DUP 3059 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402873-06 | | L1402873-07 | | L1402873-08 | | L1402873-09 | | L1402873-10 | |
| | S1/G1-08 | Units | | Qual | | Qual | | Qual | | Qual | | Qual |
| Aroclor 1016 | 2 | mg/kg | 0.0386 | U | 0.0387 | U | 0.0421 | U | 0.139 | U | 0.037 | U |
| Aroclor 1221 | 2 | mg/kg | 0.0386 | U | 0.0387 | U | 0.0421 | U | 0.139 | U | 0.037 | U |
| Aroclor 1232 | 2 | mg/kg | 0.0386 | U | 0.0387 | U | 0.0421 | U | 0.139 | U | 0.037 | U |
| Aroclor 1242 | 2 | mg/kg | 0.0386 | U | 0.0387 | U | 0.0421 | U | 0.139 | U | 0.037 | U |
| Aroclor 1248 | 2 | mg/kg | 0.0386 | U | 0.0387 | U | 0.0421 | U | 0.139 | U | 0.037 | U |
| Aroclor 1254 | 2 | mg/kg | 0.187 | | 0.129 | | 0.0421 | U | 1.35 | | 0.104 | |
| Aroclor 1260 | 2 | mg/kg | 0.0386 | U | 0.0387 | U | 0.0421 | U | 0.139 | U | 0.037 | U |
| Aroclor 1262 | 2 | mg/kg | 0.0386 | U | 0.0387 | U | 0.0421 | U | 0.139 | U | 0.037 | U |
| Aroclor 1268 | 2 | mg/kg | 0.0386 | U | 0.0387 | U | 0.0421 | U | 0.139 | U | 0.037 | U |

| LOCATION | | | DUP 3057 | |
|---|---|---|---|---|
| SAMPLING DATE | | | 04-FEB-14 | |
| LAB SAMPLE ID | | | L1402873-12 | |
| | S1/G1-08 | Units | | Qual |
| Aroclor 1016 | 2 | mg/kg | 0.207 | U |
| Aroclor 1221 | 2 | mg/kg | 0.207 | U |
| Aroclor 1232 | 2 | mg/kg | 0.207 | U |
| Aroclor 1242 | 2 | mg/kg | 0.207 | U |
| Aroclor 1248 | 2 | mg/kg | 0.207 | U |
| Aroclor 1254 | 2 | mg/kg | 1.44 | |
| Aroclor 1260 | 2 | mg/kg | 0.207 | U |
| Aroclor 1262 | 2 | mg/kg | 0.207 | U |
| Aroclor 1268 | 2 | mg/kg | 0.207 | U |

**DMF PARCEL 1 / DMF PARCEL 2**

**RTN: 4-24296, 4-15490**

**Table 1A**
**EPH, PAHs, and Coal Ash Soil Data**
**16 Blackmer Street**
**New Bedford, MA**
**1999, 2000, and 2006**
**Concentration (mg/kg)**

| SAMPLE IDENTIFICATION<br>SAMPLE DEPTH (FT)<br>COLLECTION DATE | Reportable Concentrations updated Feb. 2008<br>RCS-1 | <br>RSC-2 | SS-04A**<br>0-3<br>09/28/99 | SS-04B**<br>0-3<br>09/28/99 | TP-03<br>M&E<br>01/2000 | TP-04<br>M&E<br>01/2000 | CSS-2<br>0-3<br>03/06/00 | CSS-2<br>3-6<br>03/06/00 | CSS-500*<br>0-3<br>03/06/00 | CSS-500*<br>3-6<br>03/06/00 | CGW1/S-3<br>0-2<br>03/07/00 | BH2<br>2.5-4<br>05/25/06 | BH2<br>4-6.5<br>05/25/06 | Duplicate 4<br>(CSETP1 3-6')<br>05/25/06 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TARGET EPH** | | | | | | | | | | | | | | |
| C9-C18 Aliphatic Hydrocarbons | 1,000 | 3,000 | 3.2 | ND | DU | DU | ND | ND | ND | ND | ND | <13.2 | <11.8 | <13.0 |
| C19-C36 Aliphatic Hydrocarbons | 3,000 | 5,000 | 50 | 19 | DU | DU | 29 | 17.0 | 27.0 | 16.0 | 32.0 | 32.2 | 19.2 | <13.0 |
| C11-C22 Aromatic Hydrocarbons | 1,000 | 3,000 | 180 | 120 | DU | DU | 78.0 | 280.0 | 120.0 | 240.0 | 180.0 | 117.0 | 177.0 | <13.0 |
| **PAHs** | | | | | | | | | | | | | | |
| Naphthalene | 4 | 40 | 0.45 | 0.51 | DU | DU | ND | 2.200 | ND | 0.550 | 0.740 | 0.203 | 0.280 | <0.0649 |
| 2-Methylnaphthalene | 0.7 | 80 | 0.44 | 0.25 | DU | DU | 5.000 | 0.860 | ND | ND | ND | <0.0658 | <0.058 | <0.0649 |
| Acenaphthene | 2 | 3,000 | 0.47 | 1.2 | DU | DU | ND | 2.000 | 0.900 | 0.850 | 2.100 | 0.405 | 0.689 | <0.130 |
| Phenanthrene | 10 | 1,000 | 11 | 14 | DU | DU | 5.400 | 36.000 | 7.900 | 27.000 | 23.000 | 5.770 | 8.260 | <0.0649 |
| Acenaphthylene | 1 | 10 | 1.2 | 0.7 | DU | DU | ND | 0.600 | ND | 0.540 | ND | 0.213 | 0.276 | <0.0649 |
| Fluorene | 1,000 | 3,000 | 1.6 | 1.4 | DU | DU | 0.640 | 3.800 | 0.990 | 2.200 | 2.800 | 0.495 | 0.795 | <0.0325 |
| Anthracene | 1,000 | 3,000 | 3.3 | 4.2 | DU | DU | 1.400 | 8.300 | 2.300 | 6.400 | 6.500 | 1.130 | 1.720 | <0.0649 |
| Fluoranthene | 1,000 | 3,000 | 16 | 21 | DU | DU | 7.60 | 41.00 | 9.600 | 35.000 | 23.000 | 8.430 | 10.800 | <0.260 |
| Pyrene | 1,000 | 3,000 | 20 | 19 | DU | DU | 7.60 | 38.00 | 9.700 | 32.000 | 22.000 | 7.110 | 8.910 | <0.260 |
| Benz[a]Anthracene | 7 | 40 | 8.9 | 10 | DU | DU | 3.50 | 17.00 | 4.500 | 16.000 | 9.800 | 3.470 | 4.380 | <0.130 |
| Chrysene | 70 | 400 | 8.4 | 9.9 | DU | DU | 3.80 | 16.00 | 4.900 | 13.000 | 10.000 | 3.470 | 4.470 | <0.130 |
| Benzo[b]Fluoranthene | 7 | 40 | 7.7 | 9.1 | DU | DU | 3.900 | 18.000 | 5.100 | 14.000 | 9.700 | <0.197 | <0.176 | <0.195 |
| Benzo[k]Fluoranthene | 70 | 400 | 5 | 11 | DU | DU | 1.60 | 3.50 | 2.500 | 5.600 | 4.600 | <0.132 | <0.118 | <0.130 |
| Benzo[a]Pyrene | 2 | 4 | **8.2** | **11** | DU | DU | **3.200** | **13.000** | **4.100** | **11.000** | **8.400** | <0.132 | <0.118 | <0.130 |
| Indeno[1,2,3-c,d]Pyrene | 7 | 40 | 7.5 | 7.4 | DU | DU | 2.600 | 10.000 | 4.000 | 9.200 | 6.500 | <0.0658 | <0.0588 | <0.0649 |
| Dibenzo[a,h]Anthracene | 0.7 | 4 | **7.5** | 2.5 | DU | DU | 2.600 | **10.000** | **4.000** | **9.200** | **6.500** | <0.132 | <0.118 | <0.130 |
| Benzo[g,h,i]Perylene | 1,000 | 3,000 | 5.3 | 8.3 | DU | DU | 2.000 | 7.300 | 3.600 | 6.700 | 4.700 | <0.132 | <0.118 | <0.130 |
| **COAL ASH** | | | | | | | NA | NA | NA | NA | NA | NA | coal ash | NA |

* Duplicate of CSS-2
ND - Non Detect
NA - Not Analyzed
NS - Not Specified
**Bold** indicates RCS2 threshold exceeded

Cygnus TP-1 through TP-8 were NA for EPH/PAH
RCs updated in Feb 2008
** Pesticides detected at estimated concentrations less than the RSC-2 standards.
DU - Data unkown/Unavailable - data tables, missing from M&E and Cygnus reports, but discussed in body of report.

**Table 1A**
**EPH, PAHs, and Coal Ash Soil Data**
**16 Blackmer Street**
**New Bedford, MA**
**1999, 2000, and 2006**
**Concentration (mg/kg)**

| SAMPLE IDENTIFICATION<br>SAMPLE DEPTH (FT)<br>COLLECTION DATE | Reportable Concentrations updated Feb. 2008<br>RCS-1 | <br>RSC-2 | BH1<br>0-2.5<br>05/25/06 | BH-1<br>2.5-5<br>05/25/06 | CSE TP-1<br>0-3<br>05/25/06 | CSE TP-1<br>3-6<br>05/25/06 | CSE TP-2<br>0-3<br>05/25/06 | CSE TP-2<br>3-6<br>05/25/06 | CSE TP-3<br>0-3<br>05/25/06 | Duplicate 3<br>(CSETP3 0-3')<br>05/25/06 | CSE TP-3<br>3-6<br>05/25/06 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **TARGET EPH** | | | | | | | | | | | |
| C9-C18 Aliphatic Hydrocarbons | 1,000 | 3,000 | <11.5 | <12.2 | <14.5 | <13.2 | <15.2 | <15.4 | <12.0 | <12.3 | <13.3 |
| C19-C36 Aliphatic Hydrocarbons | 3,000 | 5,000 | 20.2 | 83.4 | <14.5 | <13.2 | 15.2 | 54.7 | 12.7 | 44.1 | <13.3 |
| C11-C22 Aromatic Hydrocarbons | 1,000 | 3,000 | 292.0 | 242.0 | <14.5 | <13.2 | 902.0 | 84.3 | 337.0 | 613.0 | <13.3 |
| **PAHs** | | | | | | | | | | | |
| Naphthalene | 4 | 40 | 0.147 | 0.239 | <0.0725 | <0.0658 | <0.0758 | <0.0769 | 0.210 | 0.185 | <0.0667 |
| 2-Methylnaphthalene | 0.7 | 80 | <0.057 | <0.061 | <0.0725 | <0.0658 | <0.0758 | <0.0769 | <0.0602 | <0.0617 | <0.0667 |
| Acenaphthene | 2 | 3,000 | 0.602 | 0.420 | <0.145 | 0.132 | <0.152 | <0.154 | 0.301 | 0.827 | <0.133 |
| Phenanthrene | 10 | 1,000 | 25.800 | 6.740 | 0.380 | <0.0658 | 36.400 | 1.500 | 9.350 | 21.500 | <0.0667 |
| Acenaphthylene | 1 | 10 | 1.260 | 0.307 | <0.0725 | <0.0658 | 1.390 | 0.246 | 0.619 | 0.731 | <0.0667 |
| Fluorene | 1,000 | 3,000 | 1.830 | 0.505 | <0.0362 | <0.0329 | 1.320 | <0.0385 | 0.535 | 1.410 | <0.0333 |
| Anthracene | 1,000 | 3,000 | 4.660 | 1.300 | <0.0725 | <0.0658 | 7.840 | 0.317 | 1.600 | 3.700 | <0.0667 |
| Fluoranthene | 1,000 | 3,000 | 33.000 | 11.400 | 0.357 | <0.263 | 64.700 | 3.170 | 20.700 | 33.600 | <0.267 |
| Pyrene | 1,000 | 3,000 | 27.800 | 10.100 | 0.304 | <0.263 | 59.500 | 2.950 | 18.300 | 33.300 | <0.267 |
| Benz[a]Anthracene | 7 | 40 | 12.100 | 4.900 | 0.186 | <0.132 | **29.400** | 1.310 | **9.850** | **15.700** | <0.133 |
| Chrysene | 70 | 400 | 11.300 | 5.110 | 0.275 | <0.132 | 26.000 | 1.460 | 9.870 | 16.400 | <0.133 |
| Benzo[b]Fluoranthene | 7 | 40 | <0.172 | <0.183 | <0.217 | <0.197 | <0.227 | <0.231 | <0.181 | <0.185 | <0.200 |
| Benzo[k]Fluoranthene | 70 | 400 | <0.115 | <0.122 | <0.145 | <0.132 | <0.152 | <0.154 | <0.120 | <0.123 | <0.133 |
| Benzo[a]Pyrene | 2 | 4 | <0.115 | <0.122 | <0.145 | <0.132 | <0.152 | <0.154 | <0.120 | <0.123 | <0.133 |
| Indeno[1,2,3-c,d]Pyrene | 7 | 40 | <0.0575 | <0.0610 | <0.0725 | <0.0658 | <0.0758 | <0.0769 | <0.0602 | <0.0617 | <0.0667 |
| Dibenzo[a,h]Anthracene | 0.7 | 4 | <0.115 | <0.122 | <0.145 | <0.132 | <0.152 | <0.154 | <0.120 | <0.123 | <0.133 |
| Benzo[g,h,i]Perylene | 1,000 | 3,000 | <0.115 | <0.122 | <0.145 | <0.132 | <0.152 | <0.154 | <0.120 | <0.123 | <0.133 |
| **COAL ASH** | | | NA | NA | COAL ASH | NA | NA | NA | NA | NA | NA |

* Duplicate of CSS-2
ND - Non Detect
NA - Not Analyzed
NS - Not Specified
**Bold** indicates RCS2 threshold exceeded

Cygnus TP-1 through TP-8 were NA for EPH/PAH
RCs updated in Feb 2008

**Table 1B**
**PCBs and Asbestos Containing Materials (ACM) Soil Data**
**16 Blackmer Street**
**New Bedford, MA**
**1999, 2000, and 2006**
**Concentration (mg/kg)**

| | South Area | North Area | North Area | South Area | South Area | South Area | South Area | South Area | North Area | North Area | North Area |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SAMPLE IDENTIFICATION** | **CGW1/S-3** | **BH1** | **BH-1** | **BH2** | **SS-04A** | **SS-04B** | **TP-03** | **TP-04** | **CSE TP-2** | **CSE TP-3** | **CSE TP-1** |
| **SAMPLE DEPTH (FT)** | **0-2** | **0-2.5** | **2.5-5** | **2.5-4** | **0-3** | **0-3** | | | **3-6** | **0-3** | **0-3** |
| **COLLECTION DATE** | **03/07/00** | **05/25/06** | **05/25/06** | **05/25/06** | **09/28/99** | **09/28/99** | **01/2000** | **01/2000** | **05/25/06** | **05/25/06** | **05/25/06** |
| **ASBESTOS** | | | | | | | | | | | |
| chrysotile | NA | NA | NA | <1% | NA | NA | NA | NA | ND | ND | ND |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| **POLYCHLORINATED BIPHENYLS (PCBs)** | | | | | | | | | | | |
| Aroclor 1221 | ND | <.0575 | <.0610 | <.0658 | ND | ND | DU | DU | <.0769 | <.0602 | <.0725 |
| Aroclor 1232 | ND | <.0575 | <.0610 | <.0658 | ND | ND | DU | DU | <.0769 | <.0602 | <.0725 |
| Aroclor 1248 | ND | <.0575 | <.0610 | <.0658 | ND | ND | DU | DU | <.0769 | <.0602 | <.0725 |
| Aroclor 1254 | ND | 0.073 | <.0610 | 0.105 | ND | 1.700 | DU | capacitors observed | <.0769 | 0.439 | <.0725 |
| Aroclor 1260 | ND | <.0575 | <.0610 | <.0658 | ND | ND | DU | DU | <.0769 | <.0602 | <.0725 |
| Aroclor 1262 | ND | <.0575 | <.0610 | <.0658 | ND | ND | DU | DU | <.0769 | <.0602 | <.0725 |
| Aroclor 1268 | ND | <.0575 | <.0610 | <.0658 | ND | ND | DU | DU | <.0769 | <.0602 | <.0725 |

ND - Not Dectected by lab method
NA - Not Analyzed
NS - Not Specified
**Bold** indicates RCS2 threshold exceeded
DU - Data unknown/Unavailable - data tables missing from M&E and Cyngus reports but discussed in body of report

**Table 1C**
**Lead Soil Data**
**16 Blackmer Street**
**New Bedford, MA**
**1999, 2000, and 2006**

| Sample Identification Number | Sample Location | Sample Depth (ft) | Collection Date | Lead mg/kg |
|---|---|---|---|---|
| CSS-01 | South Area | 0-3 | 3/6/2000 | 260 |
| CSS-1 | South Area | 3-6 | 3/6/2000 | 130 |
| CSS-2 | South Area | 0-3 | 3/6/2000 | **400** |
| CSS-500 (duplicate CSS-2) | South Area | 0-3 | 3/6/2000 | **620** |
| CSS-2 | South Area | 3-6 | 3/6/2000 | 210 |
| CSS-500 (duplicate CSS-2) | South Area | 3-6 | 3/6/2000 | 160 |
| CSS-3 | South Area | 0-3 | 3/6/2000 | **2500** |
| CSS-3 | South Area | 3-6 | 3/6/2000 | 160 |
| CSS-4 | South Area | 0-3 | 3/6/2000 | **530** |
| CSS-4 | South Area | 3-6 | 3/6/2000 | 190 |
| CSS-5 | South Area | 0-3 | 3/6/2000 | **310** |
| CSS-5 | South Area | 3-6 | 3/6/2000 | 150 |
| CGW-1/S-3 | South Area | 0-2 | 3/7/2000 | **490** |
| TP-1 | North Area | 0-3 | 5/9/2000 | 190 |
| TP-2 | North Area | 0-3 | 5/9/2000 | 140 |
| TP-3 | North Area | 0-3 | 5/9/2000 | 160 |
| TP-4 | North Area | 0-3 | 5/9/2000 | 61 |
| TP-5 | South Area | 0-3 | 5/9/2000 | 100 |
| TP-X (TP5 duplicate) | South Area | 0-3 | 5/9/2000 | 220 |
| TP-6 | South Area | 0-3 | 5/9/2000 | **930** |
| TP-7 | North Area | 0-3 | 5/9/2000 | 63 |
| TP-8 | South Area | 0-3 | 5/9/2000 | 250 |
| BH1 | North Area | 0-2.5 | 5/28/2006 | 111 |
| BH1 | North Area | 2.5-5 | 5/28/2006 | 287 |
| Duplicate 1 (BH1 2.5-5) | North Area | 2.5-5 | 5/28/2006 | 194 |
| BH1 | North Area | 5-7.5 | 5/28/2006 | 5.25 |
| BH2 | South Area | 0-2.5 | 5/28/2006 | **313** |
| BH2 | South Area | 2.5-4 | 5/28/2006 | **339** |
| Duplicate 2 (BH2 2.5-4) | South Area | 2.5-5 | 5/28/2006 | **371** |
| BH2 | South Area | 4-6.5 | 5/28/2006 | **5780** |
| SS-04A | South Area | 0-3 | 9/28/99 | **3640** |
| SS-04B | South Area | 0-3 | 9/28/99 | **379** |
| CSE/TP-1 | North Area | 0-3 | 5/28/2006 | 42.1 |
| CSE/TP-1 | North Area | 3-6 | 5/28/2006 | 5.7 |
| CSE/TP-2 | North Area | 0-3 | 5/28/2006 | 77.9 |
| CSE/TP-2 | North Area | 3-6 | 5/28/2006 | 6.65 |
| CSE/TP-3 | North Area | 0-3 | 5/28/2006 | 256 |
| CSE/TP-3 | North Area | 3-6 | 5/28/2006 | 25.9 |
| BH-6A | South Adjacent Lot | 2.5-6 | 6/12/2006 | **550** |
| BH-6B | South Adjacent Lot | 2.5-6 | 6/12/2006 | 209 |
| BH-6C | South Adjacent Lot | 2.5-6 | 6/12/2006 | **1380** |
| BH-6D | South Adjacent Lot | 2.5-6 | 6/12/2006 | **611** |

| | |
|---|---|
| Upper Concentration Limit (Method 3) | 3000 |
| Reportable Concentration S1 | 300 |
| Reportable Concentration S2 | 300 |
| MCP Background - urban fill | 600 |
| - undefined in MCP | |

**Bold** indicates RC threshold has been exceeded
Underline indicates sample was non-detect and value is half method reporting limit.

# Table 2
## EPH/PAHs/PCBs and Lead in Groundwater Data
## 16 Blackmer Street
## New Bedford, MA
## 2000 and 2006

| | | Destroyed | | | Destroyed | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | North Area | South Area | South Area | | South Area | | | | | |
| | | | | | | Reportable Concentration | | Method 1 Groundwater Standards | | |
| SAMPLE NUMBER: / COLLECTION DATE: | CSE-2 5/28/2006 | CSE-1 5/28/2006 | CSE-3 5/28/2006 | GW-01** 9/30/99 | CGW-1 3/10/2000 | GW-1 (ug/L) | GW-2 (ug/L) | GW-1 (ug/L) | GW-2 (ug/L) | GW-3 (ug/L) |
| **FULL EPH ANALYTICAL RESULTS (ug/L)** | | | | | | | | | | |
| 2-Methylnaphthalene | <1.20 | <1 | <1.14 | 14.00 | ND | 10 | 3000 | 10 | 10000 | 3000 |
| Acenaphthene | <1.20 | <1 | <1.14 | ND | ND | 20 | 5000 | 20 | NA | 5000 |
| Acenaphthylene | <1.20 | <1 | <1.14 | ND | ND | 300 | 3000 | 300 | NA | 3000 |
| Anthracene | <1.20 | <1 | <1.14 | ND | ND | 600 | 600 | 2000 | NA | 3000 |
| Benz[a]Anthracene | <1.20 | <1 | <1.14 | ND | ND | 1 | 3000 | 1 | NA | 1000 |
| Benzo[a]Pyrene | <0.0964 | <1.5 | <0.0909 | ND | ND | 0.2 | 3000 | 0.2 | NA | 500 |
| Benzo[b]Fluoranthene | <1.20 | <1 | <1.14 | ND | ND | 1 | 3000 | 1 | NA | 400 |
| Benzo[g,h,i]Perylene | <1.81 | <1.5 | <1.70 | ND | ND | 300 | 3000 | 300 | NA | 3000 |
| Benzo[k]Fluoranthene | <0.145 | <0.120 | <0.136 | ND | ND | 0.1 | 3000 | 1 | NA | 100 |
| Chrysene | <1.20 | <1 | <1.14 | ND | ND | 2 | 3000 | 2 | NA | 3000 |
| Dibenzo[a,h]Anthracene | <0.602 | <0.500 | <0.568 | ND | ND | 0.5 | 3000 | 1 | 20 | 50000 |
| Fluoranthene | <1.20 | <1 | <1.14 | ND | ND | 200 | 200 | 90 | NA | 200 |
| Fluorene | <1.20 | <1 | <1.14 | ND | ND | 300 | 3000 | 300 | NA | 3000 |
| Indeno[1,2,3-c,d]Pyrene | <1.20 | <0.240 | <0.273 | ND | ND | 0.5 | 3000 | 0.5 | NA | 100 |
| Naphthalene | <1.20 | <1 | <1.14 | 8.1 | ND | 20 | 6000 | 140 | 1000 | 20000 |
| Phenanthrene | <1.20 | <1 | <1.14 | ND | ND | 50 | 50 | 300 | NA | 50 |
| Pyrene | <1.81 | <1.5 | <1.7 | ND | ND | 200 | 3000 | 80 | NA | 20 |
| C9-C18 Aliphatic Hydrocarbons1 | <120 | <100 | <114 | ND | ND | 1000 | 1000 | 4000 | 1000 | 20000 |
| C19-C36 Aliphatic Hydrocarbons1 | <120 | <100 | <114 | ND | ND | 5000 | 20000 | 5000 | NA | 20000 |
| C11-C22 Aromatic Hydrocarbons1,2 | <120 | <100 | <114 | ND | ND | 200 | 30000 | 200 | 50000 | 30000 |
| **POLYCHLORINATED BIPHENYLS** | | | | | | | | | | |
| Aroclor 1016/1242 | <0.375 | <0.303 | <0.366 | ND | ND | 70 | 50000 | 0.5 | NA | 0.3 |
| Aroclor 1221 | <0.375 | <0.303 | <0.366 | ND | ND | 5 | 2000 | 0.5 | NA | 0.3 |
| Aroclor 1232 | <0.375 | <0.303 | <0.366 | ND | ND | 1000 | 6000 | 0.5 | NA | 0.3 |
| Aroclor 1248 | <0.375 | <0.303 | <0.366 | ND | ND | 700 | 4000 | 0.5 | NA | 0.3 |
| Aroclor 1254* | **0.871** | **0.72** | **0.83** | **2.6** | ND | 6000 | 6000 | 0.5 | NA | 0.3 |
| Aroclor 1260 | <0.375 | <0.303 | <0.366 | ND | ND | 6000 | 6000 | 0.5 | NA | 0.3 |
| Aroclor 1262 | <0.375 | <0.303 | <0.366 | ND | ND | 20 | 6000 | 0.5 | NA | 0.3 |
| Aroclor 1268 | <0.375 | <0.303 | <0.366 | ND | ND | 400 | 1000 | 0.5 | NA | 0.3 |
| **DISSOLVED LEAD** | <0.0150 | <0.0150 | <0.0150 | ND | NA | 1000 | 1000 | 15 | NA | 10 |

* sample was not filtered prior to lab analysis

** Pesticides detected in sample at concentrations less than the RCGW-2 standards.

\- undefined in MCP

***Bold italics*** indicates RC threshold has been exceeded

**Bold** indicate laboratory method reporting limit exceeded

NA - Not Applicable

**FORMER DARTMOUTH FINISHING SITE**

**RTN: 4-23616**

**Table 1a**
**Weston & Sampson**
**Summary of Test Pit Soil Analytical Results**
**45 Cove Street**
**New Bedford, MA**

| Parameters | Units | MCP RCS-1 Standards | MCP Method 1 Soil Cleanup Standards | | Sample ID, Depth, and Date | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | S-1/GW-2 | S-1/GW-3 | TP-1 (0-3') | TP-2 (0-3') | TP-3 (0-3') | TP-4 (0-3') | TP-5 (0-3') | TP-6 (0-3') | TP-7 (0-3') | TP-8 (0-3') | TP-9 (0-3') | TP-10 (0-3') | TP-11 (0-3') | TP-12 (0-3') | TP-13 (0-3') | TP-15 (0-3') | TP-17 (0-3') | TP-18 (0-3') | DUP-1 (TP-18) | TP-19 (0-3') |
| | | | | | 4/7/11 | 4/7/11 | 4/7/11 | 4/7/11 | 4/7/11 | 4/7/11 | 4/7/11 | 4/7/11 | 4/7/11 | 4/7/11 | 4/6/11 | 4/6/11 | 4/6/11 | 4/6/11 | 4/6/11 | 4/7/11 | 4/7/11 | 4/7/11 |
| **EPH** | | | | | | | | | | | | | | | | | | | | | |
| C9-C18 Aliphatics | mg/kg | 1,000 | 1,000 | 1,000 | <35 | <36 | <41 | <37 | <51 | <35 | <40 | <40 | 100 | <36 | <35 | <39 | <35 | <37 | <32 | <34 | <35 | 440 |
| C19-C36 Aliphatics | mg/kg | 3,000 | 3,000 | 3,000 | <35 | 85 | 68 | 45 | 160 | 190 | 190 | 220 | 970 | 110 | 49 | <39 | 50 | <37 | 39 | 160 | 160 | 170 |
| C11-C22 Aromatics | mg/kg | 1,000 | 1,000 | 1,000 | <35 | 100 | 56 | 46 | 170 | 89 | 120 | 160 | 3,500 | 82 | 48 | 45 | <35 | <37 | 49 | 82 | 88 | 160 |
| Unadjusted n-C11 to n-C22 Aromatics | mg/kg | NS | NS | NS | <35 | 120 | 58 | 49 | 200 | 90 | 130 | 170 | 4,500 | 88 | 52 | 51 | <35 | <37 | 58 | 120 | 89 | 180 |
| **SVOCs** | | | | | | | | | | | | | | | | | | | | | |
| Anthracene | mg/kg | 1,000 | 1,000 | 1,000 | NA | NA | NA | NA | NA | NA | <0.42 | <0.43 | NA | <0.41 | NA | NA | <0.39 | NA | NA | NA | NA | 1.60 |
| Benzo(a)anthracene | mg/kg | 7 | 7 | 7 | NA | NA | NA | NA | NA | NA | 0.49 | 0.56 | NA | <0.41 | NA | NA | <0.39 | NA | NA | NA | NA | 3.80 |
| Benzo(a)pyrene | mg/kg | 2 | 2 | 2 | NA | NA | NA | NA | NA | NA | 0.49 | 0.64 | NA | <0.41 | NA | NA | <0.39 | NA | NA | NA | NA | 3.50 |
| Benzo(b)fluoranthene | mg/kg | 7 | 7 | 7 | NA | NA | NA | NA | NA | NA | 0.68 | 0.74 | NA | <0.41 | NA | NA | <0.39 | NA | NA | NA | NA | 4.00 |
| Benzo(g,h,i)perylene | mg/kg | 1,000 | 1,000 | 1,000 | NA | NA | NA | NA | NA | NA | <0.42 | <0.43 | NA | <0.41 | NA | NA | <0.39 | NA | NA | NA | NA | 0.53 |
| Benzo(k)fluoranthene | mg/kg | 70 | 70 | 70 | NA | NA | NA | NA | NA | NA | <0.42 | <0.43 | NA | <0.41 | NA | NA | <0.39 | NA | NA | NA | NA | 1.50 |
| Chrysene | mg/kg | 70 | 70 | 70 | NA | NA | NA | NA | NA | NA | 0.55 | 0.65 | NA | <0.41 | NA | NA | <0.39 | NA | NA | NA | NA | 3.80 |
| Fluoranthene | mg/kg | 1,000 | 1,000 | 1,000 | NA | NA | NA | NA | NA | NA | 0.93 | 0.90 | NA | <0.41 | NA | NA | <0.39 | NA | NA | NA | NA | 7.00 |
| Fluorene | mg/kg | 1,000 | 1,000 | 1,000 | NA | NA | NA | NA | NA | NA | <0.42 | <0.43 | NA | <0.41 | NA | NA | <0.39 | NA | NA | NA | NA | 0.51 |
| Indeno(1,2,3-cd) Pyrene | mg/kg | 7 | 7 | 7 | NA | NA | NA | NA | NA | NA | <0.42 | <0.43 | NA | <0.41 | NA | NA | <0.39 | NA | NA | NA | NA | 0.77 |
| 2-Methylnaphthalene | mg/kg | 0.7 | 80 | 300 | NA | NA | NA | NA | NA | NA | <0.42 | <0.43 | NA | <0.41 | NA | NA | <0.39 | NA | NA | NA | NA | 0.62 |
| Naphthalene | mg/kg | 4 | 40 | 500 | NA | NA | NA | NA | NA | NA | <0.42 | <0.43 | NA | <0.41 | NA | NA | <0.39 | NA | NA | NA | NA | 5.80 |
| Phenanthrene | mg/kg | 10 | 500 | 500 | NA | NA | NA | NA | NA | NA | 0.67 | 0.44 | NA | <0.41 | NA | NA | <0.39 | NA | NA | NA | NA | 5.10 |
| Pyrene | mg/kg | 1,000 | 1,000 | 1,000 | NA | NA | NA | NA | NA | NA | 0.89 | 1.00 | NA | <0.41 | NA | NA | <0.39 | NA | NA | NA | NA | 6.80 |
| Bis(2-ethylhexyl)phthalate | mg/kg | 200 | 200 | 200 | NA | NA | NA | NA | NA | NA | <0.42 | <0.43 | NA | <0.41 | NA | NA | <0.39 | NA | NA | NA | NA | <0.410 |
| **VPH** | | | | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatics | mg/kg | 100 | 100 | 100 | NA | NA | NA | NA | NA | NA | <1.6 | <1.7 | NA | <1.3 | NA | NA | <1.4 | NA | NA | NA | NA | 32 |
| C9-C12 Aliphatics | mg/kg | 1,000 | 1,000 | 1,000 | NA | NA | NA | NA | NA | NA | 2 | 5.6 | NA | 3.3 | NA | NA | <1.4 | NA | NA | NA | NA | 720 |
| C9-C10 Aromatics | mg/kg | 100 | 100 | 100 | NA | NA | NA | NA | NA | NA | <1.6 | 4.4 | NA | 3.9 | NA | NA | <1.4 | NA | NA | NA | NA | 680 |
| Unadjusted C5-C8 Aliphatics | mg/kg | NS | NS | NS | NA | NA | NA | NA | NA | NA | <1.6 | <1.7 | NA | <1.3 | NA | NA | <1.4 | NA | NA | NA | NA | 33 |
| Unadjusted C9-C12 Aliphatics | mg/kg | NS | NS | NS | NA | NA | NA | NA | NA | NA | 2.7 | 10 | NA | 7.3 | NA | NA | <1.4 | NA | NA | NA | NA | 1,400 |
| **VOCs 8260** | | | | | | | | | | | | | | | | | | | | | |
| Isopropylbenzene | mg/kg | NS | NS | NS | <0.0055 | <0.005 | <0.006 | <0.0056 | <0.009 | <0.005 | <0.007 | <0.006 | <0.008 | <0.250 | <0.005 | <0.0061 | <0.005 | <0.0058 | <0.0064 | <0.005 | <0.0062 | 7.9 |
| Naphthalene | mg/kg | 4 | 40 | 500 | <0.0055 | <0.005 | <0.006 | <0.0056 | <0.009 | <0.005 | <0.007 | <0.006 | <0.008 | <0.250 | <0.005 | <0.0061 | <0.005 | <0.0058 | <0.0064 | <0.005 | <0.0062 | 16 |
| N-Propylbenzene | mg/kg | NS | NS | NS | <0.0055 | <0.005 | <0.006 | <0.0056 | <0.009 | <0.005 | <0.007 | <0.006 | <0.008 | <0.250 | <0.005 | <0.0061 | <0.005 | <0.0058 | <0.0064 | <0.005 | <0.0062 | 13 |
| sec-Butylbenzene | mg/kg | NS | NS | NS | <0.0055 | <0.005 | <0.006 | <0.0056 | <0.009 | <0.005 | <0.007 | <0.006 | <0.008 | <0.250 | <0.005 | <0.0061 | <0.005 | <0.0058 | <0.0064 | <0.005 | <0.0062 | 13 |
| 1,2,4-Trimethylbenzene | mg/kg | NS | NS | NS | <0.0055 | <0.005 | <0.006 | <0.0056 | <0.009 | <0.005 | <0.007 | <0.006 | <0.008 | <0.250 | <0.005 | <0.0061 | <0.005 | <0.0058 | <0.0064 | <0.005 | <0.0062 | 140 |
| **Trace Metals** | | | | | | | | | | | | | | | | | | | | | |
| Arsenic | mg/kg | 20 | 20 | 20 | <3.7 | <3.8 | <4.3 | <3.6 | <5.1 | <3.5 | <4 | <4 | <4.4 | <3.6 | <3.8 | <3.9 | <3.5 | <3.8 | <3.2 | <3.5 | <3.8 | <3.7 |
| Barium | mg/kg | 1,000 | 1,000 | 1,000 | 29 | 37 | 19 | 20 | 160 | 14 | 35 | 50 | 120 | 11 | 15 | 12 | 21 | 12 | 27 | 9.0 | 15 | 29 |
| Cadmium | mg/kg | 2 | 2 | 2 | <0.61 | <0.63 | <0.72 | <0.61 | <0.85 | <0.58 | <0.66 | 0.94 | <0.74 | <0.6 | <0.63 | <0.66 | <0.59 | <0.63 | <0.53 | <0.59 | <0.64 | <0.61 |
| Chromium | mg/kg | 30 | 30 | 30 | 7.2 | 54 | 9.5 | 7.1 | 12 | 5.0 | 8.5 | 73 | 100 | 20 | 8.6 | 6.4 | 12 | 4.0 | 8.8 | 300 | 6.1 | 5.9 |
| Lead | mg/kg | 300 | 300 | 300 | 85 | 42 | 33 | 44 | 320 | 21 | 48 | 110 | 1,400 | 7.4 | 6.9 | <6.6 | <5.9 | <6.3 | 34 | 38 | 26 | 52 |
| Mercury | mg/kg | 20 | 20 | 20 | 0.047 | 0.170 | 0.059 | 0.053 | 0.370 | 0.055 | 0.320 | 0.110 | 0.97 | 0.039 | 0.24 | 0.036 | <0.023 | <0.024 | 0.041 | <0.023 | 0.063 | 0.140 |
| Selenium | mg/kg | 400 | 400 | 400 | <6.1 | <6.3 | <7.2 | <6.1 | <8.5 | <5.8 | <6.6 | <6.7 | <7.4 | <6 | <6.3 | <6.6 | <5.9 | <6.3 | <5.3 | <5.9 | <6.4 | <6.1 |
| Silver | mg/kg | 100 | 100 | 100 | <1.2 | <1.3 | <1.4 | <1.2 | <1.7 | <1.2 | <1.3 | <1.3 | <1.5 | <1.2 | <1.3 | <1.3 | <1.2 | <1.3 | <1.1 | <1.2 | <1.3 | <1.2 |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | |
| Aroclor 1254 | mg/kg | 2 | 2 | 2 | NA | NA | NA | NA | NA | NA | <0.11 | 0.12 | NA | <0.1 | NA | NA | <0.092 | NA | NA | NA | NA | <0.1 |
| Aroclor 1260 | mg/kg | 2 | 2 | 2 | NA | NA | NA | NA | NA | NA | <0.11 | <0.11 | NA | <0.1 | NA | NA | <0.092 | NA | NA | NA | NA | <0.1 |

QC by LEM 5/31/11



**Abbreviations:**
SVOCs = Semi-Volatile Organic Compounds
EPH = Extractable Petroleum Hydrocarbons
VPH = Volatile Petroleum Hydrocarbons
VOCs = Volatile Organic Compounds
PCBs = Polychlorinated Biphenyls
mg/kg = milligrams per kilogram
NS = No Standard
NA = Not Analyzed

**Notes:**
Lab ID: 141086 & 141430
Standards are from the Massachusetts Contingency Plan (MCP),
310 CMR 40.0000, revised February 14, 2008.
< = indicates parameter not detected above laboratory method reporting limit, shown

**Table 1b**
**Weston & Sampson**
**Summary of Soil Boring & Stock Pile Analytical Results**
**45 Cove Street**
**New Bedford, MA**

| Parameters | Units | MCP RCS-1 Standards | MCP Method 1 Soil Cleanup | | Sample ID, Depth, and Date | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | S-1/GW-2 | S-1/GW-3 | WS-1 (0-3') | WS-3 (0-3') | WS-4 (0-3') | WS-7 (0-3') | WS-8 (0-3') | WS-9 (0-3') | WS-11 (0-3') | DUP-1 (WS-11) | WS-13 (0-3') | WS-14 (0-3') | WS-15 (0-3') | SP-1 | SP-2 | SP-3 | SP-4 | SP-5 |
| | | | | | 4/20/11 | 4/20/11 | 4/20/11 | 4/20/11 | 4/20/11 | 4/20/11 | 4/20/11 | 4/19/11 | 4/19/11 | 4/19/11 | 4/19/11 | 4/20/11 | 4/20/11 | 4/6/11 | 4/20/11 | 4/6/11 |
| **EPH** | | | | | | | | | | | | | | | | | | | | |
| C9-C18 Aliphatics | mg/kg | 1,000 | 1,000 | 1,000 | <68 | <35 | <39 | <35 | 66 | <34 | <33 | <34 | <33 | <34 | <23 | <33 | <34 | <430 | <24 | <36 |
| C19-C36 Aliphatics | mg/kg | 3,000 | 3,000 | 3,000 | 99 | 78 | 110 | 210 | 300 | 71 | 65 | 68 | 40 | 79 | 90 | 260 | 1,000 | 2,900 | 550 | 200 |
| C11-C22 Aromatics | mg/kg | 1,000 | 1,000 | 1,000 | 140 | 96 | 98 | 160 | 500 | 87 | 50 | 52 | 33 | 41 | 98 | 3,400 | 1,000 | 5,000 | 1,700 | 140 |
| Unadjusted n-C11 to n-C22 Aromati | mg/kg | NS | NS | NS | 160 | 110 | 100 | 170 | 620 | 110 | 52 | 56 | 34 | 42 | 120 | 4,200 | 1,100 | 6,400 | 2,000 | 150 |
| **SVOCs** | | | | | | | | | | | | | | | | | | | | |
| Anthracene | mg/kg | 1,000 | 1,000 | 1,000 | 0.88 | <0.38 | <0.44 | <0.38 | 0.46 | <0.38 | <0.37 | <0.36 | <0.35 | <0.39 | 1.10 | 21 | 2.50 | <24 | 16 | 0.43 |
| Benzo(a)anthracene | mg/kg | 7 | 7 | 7 | 2.10 | 1.50 | <0.44 | 1.40 | 2.20 | 0.40 | <0.37 | <0.36 | <0.35 | <0.39 | 3.10 | 80 | 10 | 130 | 77 | 1.30 |
| Benzo(a)pyrene | mg/kg | 2 | 2 | 2 | 1.70 | 1.40 | <0.44 | 1.10 | 1.90 | 0.38 | <0.37 | <0.36 | <0.35 | <0.39 | 2.70 | 66 | 10 | 110 | 62 | 1.20 |
| Benzo(b)fluoranthene | mg/kg | 7 | 7 | 7 | 2.20 | 2.00 | <0.44 | 1.80 | 3.00 | 0.52 | <0.37 | <0.36 | <0.35 | 0.41 | 4.10 | 89 | 15 | 140 | 83 | 1.60 |
| Benzo(g,h,i)perylene | mg/kg | 1,000 | 1,000 | 1,000 | 1.10 | 0.52 | <0.44 | <0.38 | 0.57 | <0.38 | <0.37 | <0.36 | <0.35 | <0.39 | 0.65 | 30 | <1.9 | 52 | 19 | 0.39 |
| Benzo(k)fluoranthene | mg/kg | 70 | 70 | 70 | 0.77 | 0.70 | <0.44 | 0.63 | 0.95 | <0.38 | <0.37 | <0.36 | <0.35 | <0.39 | 1.30 | 36 | 5.20 | 53 | 33 | 0.57 |
| Chrysene | mg/kg | 70 | 70 | 70 | 2.00 | 1.50 | <0.44 | 1.20 | 2.20 | 0.39 | <0.37 | <0.36 | <0.35 | <0.39 | 2.90 | 81 | 11 | 130 | 71 | 1.40 |
| Fluoranthene | mg/kg | 1,000 | 1,000 | 1,000 | 4.90 | 3.00 | <0.44 | 2.30 | 4.40 | 0.80 | 0.37 | 0.43 | <0.35 | 0.75 | 6.60 | 160 | 20 | 230 | 140 | 2.80 |
| Fluorene | mg/kg | 1,000 | 1,000 | 1,000 | <0.75 | <0.38 | <0.44 | <0.38 | <0.39 | <0.38 | <0.37 | <0.36 | <0.35 | <0.39 | <0.37 | <18 | <1.9 | <24 | <7.7 | <0.39 |
| Indeno(1,2,3-cd) Pyrene | mg/kg | 7 | 7 | 7 | 1.10 | 0.63 | <0.44 | 0.47 | 0.74 | <0.38 | <0.37 | <0.36 | <0.35 | <0.39 | 0.89 | 41 | 2.60 | 71 | 27 | 0.51 |
| 2-Methylnaphthalene | mg/kg | 0.7 | 80 | 300 | <0.75 | <0.38 | <0.44 | <0.38 | <0.39 | <0.38 | <0.37 | <0.36 | <0.35 | <0.39 | <0.37 | <18 | <1.9 | <24 | <7.7 | <0.39 |
| Naphthalene | mg/kg | 4 | 40 | 500 | <0.75 | <0.38 | <0.44 | <0.38 | <0.39 | <0.38 | <0.37 | <0.36 | <0.35 | <0.39 | <0.37 | <18 | <1.9 | <24 | <7.7 | <0.39 |
| Phenanthrene | mg/kg | 10 | 500 | 500 | 4.70 | 1.90 | <0.44 | 1.10 | 2.60 | 0.51 | <0.37 | <0.36 | <0.35 | 0.52 | 4.80 | 110 | 13 | 110 | 70 | 2.00 |
| Pyrene | mg/kg | 1,000 | 1,000 | 1,000 | 4.20 | 2.70 | <0.44 | 1.70 | 3.50 | 0.65 | <0.37 | 0.37 | <0.35 | 0.64 | 5.10 | 140 | 17 | 210 | 120 | 2.30 |
| Bis(2-ethylhexyl)phthalate | mg/kg | 200 | 200 | 200 | <0.75 | <0.38 | <0.44 | <0.38 | <0.39 | 0.70 | <0.37 | <0.36 | <0.35 | <0.39 | <0.37 | <18 | <1.9 | <24 | <7.7 | <0.39 |
| **VPH** | | | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatics | mg/kg | 100 | 100 | 100 | <3.7 | 2.1 | <1.6 | <1.1 | 1.4 | <1.1 | <1.0 | 1.0 | 1.4 | <1.0 | <1.1 | <1.0 | <1.4 | <2.5 | <1.7 | <1.5 |
| C9-C12 Aliphatics | mg/kg | 1,000 | 1,000 | 1,000 | <3.7 | <1.3 | <1.6 | <1.1 | 20 | 4.3 | <1.0 | <1.0 | <1.0 | <1.0 | <1.1 | 1.0 | 6.1 | <2.5 | <1.7 | <1.5 |
| C9-C10 Aromatics | mg/kg | 100 | 100 | 100 | <3.7 | <1.3 | <1.6 | <1.1 | 21 | 2.3 | <1.0 | <1.0 | <1.0 | <1.0 | <1.1 | <1.0 | 1.8 | <2.5 | <1.7 | <1.5 |
| Unadjusted C5-C8 Aliphatics | mg/kg | NS | NS | NS | <3.7 | 2.2 | <1.6 | <1.1 | 1.5 | <1.1 | <1.0 | 1.1 | 1.4 | <1.0 | <1.1 | <1.0 | <1.4 | <2.5 | <1.7 | <1.5 |
| Unadjusted C9-C12 Aliphatics | mg/kg | NS | NS | NS | <3.7 | <1.3 | <1.6 | <1.1 | 42 | 6.7 | <1.0 | <1.0 | <1.0 | <1.0 | <1.1 | 1.5 | 8.1 | <2.5 | 2.5 | <1.5 |
| **VOCs 8260** | | | | | | | | | | | | | | | | | | | | |
| Isopropylbenzene | mg/kg | NS | NS | NS | <0.014 | <0.0054 | <0.0065 | <0.0055 | <0.250 | <0.250 | <0.0053 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0063 | <0.0065 | <0.011 | <0.0082 | <0.0051 |
| Naphthalene | mg/kg | 4 | 40 | 500 | <0.014 | <0.0054 | <0.0065 | <0.0055 | <0.250 | <0.250 | <0.0053 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0063 | <0.0065 | <0.011 | <0.0082 | <0.0051 |
| N-Propylbenzene | mg/kg | NS | NS | NS | <0.014 | <0.0054 | <0.0065 | <0.0055 | <0.250 | <0.250 | <0.0053 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0063 | <0.0065 | <0.011 | <0.0082 | <0.0051 |
| sec-Butylbenzene | mg/kg | NS | NS | NS | <0.014 | <0.0054 | <0.0065 | <0.0055 | <0.250 | <0.250 | <0.0053 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0063 | <0.0065 | <0.011 | <0.0082 | <0.0051 |
| 1,2,4-Trimethylbenzene | mg/kg | NS | NS | NS | <0.014 | <0.0054 | <0.0065 | <0.0055 | <0.250 | <0.250 | <0.0053 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0063 | <0.0065 | <0.011 | <0.0082 | <0.0051 |
| **Trace Metals** | | | | | | | | | | | | | | | | | | | | |
| Arsenic | mg/kg | 20 | 20 | 20 | <6.7 | <3.6 | <3.9 | <3.5 | <3.7 | <3.4 | <3.3 | <3.4 | <3.4 | <3.4 | <3.6 | <3.4 | 5.30 | 13 | 7.70 | <3.7 |
| Barium | mg/kg | 1,000 | 1,000 | 1,000 | 19 | 47 | 18 | 49 | 27 | 21 | 18 | 16 | 26 | 12 | 39 | 84 | 280 | 1,500 | 490 | 410 |
| Cadmium | mg/kg | 2 | 2 | 2 | <1.1 | <0.6 | <0.66 | <0.59 | <0.61 | <0.56 | <0.55 | <0.56 | <0.57 | <0.57 | <0.6 | 0.66 | 0.92 | 4.8 | 1.90 | 0.62 |
| Chromium | mg/kg | 30 | 30 | 30 | 8.30 | 15 | 13 | 8.5 | 17 | 13 | 12 | 9.30 | 8.00 | 6.90 | 9.5 | 32 | 20 | 63 | 28 | 16 |
| Lead | mg/kg | 300 | 300 | 300 | 100 | 64 | 12 | 75.0 | 46 | 36 | 8.50 | 7.10 | <5.7 | 6.20 | 47 | 230 | 340 | 2,600 | 970 | 140 |
| Mercury | mg/kg | 20 | 20 | 20 | 0.05 | 0.110 | 0.095 | 0.540 | 0.100 | 0.30 | 0.180 | 0.140 | <0.019 | <0.019 | 0.080 | 0.620 | 0.66 | 11 | 2.30 | 0.320 |
| Selenium | mg/kg | 400 | 400 | 400 | <11 | <6.0 | <6.6 | <5.9 | <6.1 | <5.6 | <5.5 | <5.6 | <5.7 | <5.7 | <6.0 | <5.7 | <5.6 | <7.6 | <6.2 | <6.1 |
| Silver | mg/kg | 100 | 100 | 100 | <2.2 | <1.2 | <1.3 | <1.2 | <1.2 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.2 | <1.1 | <1.1 | <1.5 | <1.2 | <1.2 |
| **PCBs** | | | | | | | | | | | | | | | | | | | | |
| Aroclor 1254 | mg/kg | 2 | 2 | 2 | <0.18 | 0.31 | <0.1 | <0.091 | <0.096 | <0.09 | <0.089 | <0.088 | <0.088 | <0.094 | <0.094 | 0.86 | 1.3 | 0.73 | 1.3 | 0.18 |
| Aroclor 1260 | mg/kg | 2 | 2 | 2 | <0.18 | <0.094 | <0.1 | <0.091 | <0.096 | <0.09 | <0.089 | <0.088 | <0.088 | <0.094 | <0.094 | <0.09 | <0.18 | 0.49 | <0.097 | <0.094 |

QC by LEM 5/31/11

O:\New Bedford MA\Brownfields 2100655\Cove Street Site\Phase II Documents\Data Tables\[Soil Analytical Results.xls]Sheet1

**Abbreviations:**
SVOCs = Semi-Volatile Organic Compounds
EPH = Extractable Petroleum Hydrocarbons
VPH = Volatile Petroleum Hydrocarbons
VOCs = Volatile Organic Compounds
PCBs = Polychlorinated Biphenyls
mg/kg = milligrams per kilogram
NS = No Standard
NA = Not Analyzed

**Notes:**
Lab ID: 141086 & 141430
Standards are from the Massachusetts Contingency Plan (MCP),
310 CMR 40.0000, revised February 14, 2008.
< = indicates parameter not detected above laboratory method reporting limit, shown

**Table 1c**
**Weston & Sampson**
**Summary of Soil Analytical Results**
**45 Cove Street**
**New Bedford, MA**
**April, May, August 2012**

| Parameters | Units | MassDEP Reportable Concentrations[5] | Method 1 Soil Standards[1] | | | | Sampling Location, Depth, and Date | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RC S-1 | S-1/GW2 | S-1/GW3 | S-2/GW2 | S-2/GW3 | TP-19N 0-3 ft 5/7/12 | TP-19N 0-3 ft 8/9/12 | TP-19S 0-3 ft 5/7/12 | TP-19S 0-3 ft 8/10/12 | TP-19E 0-3 ft 4/30/12 | TP-19E 0-3 ft 8/9/12 | TP-19W 0-3 ft 5/7/12 | TP-19W 0-3 ft 8/10/12 | TP-2N 0-3 ft 5/7/12 | TP-2N 0-3 ft 8/10/12 | TP-2W 0-3 ft 5/7/12 | TP-2W 0-3 ft 8/10/12 | TP-18W 0-3 ft 5/7/12 | TP-18W 0-3 ft 8/10/12 | TP-18S 0-3 ft 5/7/12 | TP-18S 0-3 ft 8/10/12 | DUP-1 0-3 ft 8/10/12 |
| **TPH** | | | | | | | | | | | | | | | | | | | | | | | |
| UNADJUSTED TPH | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | 150 | NA | 125 | NA | 2700 * | NA | 240 * | NA | 290 * | NA | 800 * | NA | 380 * | NA | 220 | NA | NA |
| **EPH** | | | | | | | | | | | | | | | | | | | | | | | |
| C9-C18 ALIPHATICS | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | NA | 19 | NA | 120 | NA | 60 | NA | <20 | NA | <14 | NA | <13 | NA | <13 | NA | <14 | <13 |
| C19-C36 ALIPHATICS | mg/kg | 3000 | 3000 | 3000 | 5000 | 5000 | NA | 36 | NA | 350 | NA | 140 | NA | <20 | NA | 41 | NA | <13 | NA | 24 | NA | <14 | 13 |
| Unadjusted n-C11 to n-C22 AROMATICS | mg/kg | NS | NS | NS | NS | NS | NA | 67 | NA | 330 | NA | 260 | NA | <20 | NA | 69 | NA | 29 | NA | 39 | NA | <14 | 17 |
| C11-C22 AROMATICS | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | NA | 49 | NA | 300 | NA | 180 | NA | <20 | NA | 55 | NA | 23 | NA | 35 | NA | <14 | 16 |
| ACENAPHTHENE | mg/kg | 4 | 1000 | 1000 | 3000 | 3000 | NA | 0.26 | NA | 1.3 | NA | 0.70 | NA | <0.20 | NA | <0.14 | NA | 0.13 | NA | <0.13 | NA | <0.14 | <0.13 |
| ACENAPHTHYLENE | mg/kg | 1 | 600 | 10 | 600 | 10 | NA | <0.12 | NA | 0.85 | NA | <0.38 | NA | <0.20 | NA | <0.14 | NA | <0.13 | NA | <0.13 | NA | <0.14 | <0.13 |
| ANTHRACENE | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | NA | 0.46 | NA | <0.80 | NA | 1.5 | NA | <0.20 | NA | 0.37 | NA | <0.13 | NA | <0.13 | NA | <0.14 | <0.13 |
| BENZO(A)ANTHRACENE | mg/kg | 7 | 7 | 7 | 40 | 40 | NA | 1.5 | NA | 2.2 | NA | 6.8 | NA | 0.20 | NA | 1.0 | NA | 0.62 | NA | 0.45 | NA | <0.14 | 0.35 |
| BENZO(A)PYRENE | mg/kg | 2 | 2 | 2 | 4 | 4 | NA | 1.2 | NA | 1.8 | NA | 5.5 | NA | <0.20 | NA | 0.91 | NA | 0.43 | NA | 0.42 | NA | <0.14 | <0.13 |
| BENZO(B)FLUORANTHENE | mg/kg | 7 | 7 | 7 | 40 | 40 | NA | 1.7 | NA | 3.0 | NA | 8.0 | NA | <0.20 | NA | 1.3 | NA | 0.51 | NA | 0.53 | NA | <0.14 | <0.13 |
| BENZO(G,H,I)PERYLENE | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | NA | 0.70 | NA | <0.80 | NA | 3.7 | NA | <0.20 | NA | 0.53 | NA | 0.35 | NA | 0.60 | NA | <0.14 | <0.13 |
| BENZO(K)FLUORANTHENE | mg/kg | 70 | 70 | 70 | 400 | 400 | NA | 0.57 | NA | 1.6 | NA | 2.8 | NA | <0.20 | NA | 0.46 | NA | 0.15 | NA | 0.26 | NA | <0.14 | <0.13 |
| CHRYSENE | mg/kg | 70 | 70 | 70 | 400 | 400 | NA | 1.6 | NA | 1.9 | NA | 7.1 | NA | 0.22 | NA | 1.2 | NA | 0.55 | NA | 0.33 | NA | <0.14 | 0.16 |
| DIBENZ(A,H)ANTHRACENE | mg/kg | 0.7 | 0.7 | 0.7 | 4 | 4 | NA | 0.27 | NA | <0.80 [6] | NA | 1.2 | NA | <0.20 | NA | 0.22 | NA | <0.13 | NA | <0.13 | NA | <0.14 | <0.13 |
| FLUORANTHENE | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | NA | 2.9 | NA | 4.3 | NA | 12 | NA | 0.27 | NA | 2.5 | NA | 0.82 | NA | 0.71 | NA | <0.14 | <0.13 |
| FLUORENE | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | NA | 0.35 | NA | 0.86 | NA | 0.78 | NA | <0.20 | NA | 0.21 | NA | <0.13 | NA | <0.13 | NA | <0.14 | <0.13 |
| INDENO(1,2,3-CD)PYRENE | mg/kg | 7 | 7 | 7 | 40 | 40 | NA | 0.84 | NA | <0.80 | NA | 3.9 | NA | <0.20 | NA | 0.65 | NA | 0.27 | NA | <0.13 | NA | <0.14 | <0.13 |
| 2-METHYLNAPHTHALENE | mg/kg | 0.7 | 80 | 300 | 80 | 500 | NA | <0.12 | NA | 11 | NA | <0.38 | NA | <0.20 | NA | <0.14 | NA | <0.13 | NA | <0.13 | NA | <0.14 | <0.13 |
| NAPHTHALENE | mg/kg | 4 | 40 | 500 | 40 | 1000 | NA | 0.19 | NA | 0.86 | NA | <0.38 | NA | <0.20 | NA | <0.14 | NA | <0.13 | NA | <0.13 | NA | <0.14 | <0.13 |
| PHENANTHRENE | mg/kg | 10 | 500 | 500 | 1000 | 1000 | NA | 2.5 | NA | 2.5 | NA | 8.4 | NA | 0.20 | NA | 1.7 | NA | 0.82 | NA | 0.19 | NA | <0.14 | <0.13 |
| PYRENE | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | NA | 2.7 | NA | 4.3 | NA | 12 | NA | 0.27 | NA | 2.3 | NA | 0.93 | NA | 0.80 | NA | <0.14 | <0.13 |
| **VPH** | | | | | | | | | | | | | | | | | | | | | | | |
| C5-C8 ALIPHATICS | mg/kg | 100 | 100 | 100 | 500 | 500 | <7.8 | NA | <4.3 | NA | <83 | NA | <4.4 | NA | <13 | NA | <16 | NA | <31 | NA | <21 | NA | NA |
| C9-C12 ALIPHATICS | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | 20 | NA | 14 | NA | 1,800 | NA | 11 | NA | <13 | NA | <16 | NA | <31 | NA | <21 | NA | NA |
| C9-C10 AROMATICS | mg/kg | 100 | 100 | 100 | 500 | 500 | 110 | NA | 13 | NA | 1,600 | NA | 6.6 | NA | <13 | NA | <16 | NA | <31 | NA | <21 | NA | NA |
| MTBE | mg/kg | 0.1 | 100 | 100 | 100 | 500 | <0.078 | NA | <0.043 | NA | <0.830 | NA | <0.044 | NA | <0.130 | NA | <0.160 | NA | <0.310 | NA | <0.210 | NA | NA |
| BENZENE | mg/kg | 2 | 30 | 30 | 200 | 200 | <0.390 | NA | <0.210 | NA | <4.1 | NA | <0.220 | NA | <0.670 | NA | <0.780 | NA | <1.5 | NA | <1.0 | NA | NA |
| TOLUENE | mg/kg | 30 | 500 | 500 | 1000 | 1000 | <0.390 | NA | <0.210 | NA | <4.1 | NA | <0.220 | NA | <0.670 | NA | <0.780 | NA | <1.5 | NA | <1.0 | NA | NA |
| ETHYLBENZENE | mg/kg | 40 | 500 | 500 | 1000 | 1000 | <0.390 | NA | <0.210 | NA | <4.1 | NA | <0.220 | NA | <0.670 | NA | <0.780 | NA | <1.5 | NA | <1.0 | NA | NA |
| M,P- XYLENES | mg/kg | 300 [4] | 300 [4] | 500 [4] | 300 [4] | 1000 [4] | <0.390 | NA | <0.210 | NA | <4.1 | NA | <0.220 | NA | <0.670 | NA | <0.780 | NA | <1.5 | NA | <1.0 | NA | NA |
| O-XYLENE | mg/kg | | | | | | <0.390 | NA | <0.210 | NA | <4.1 | NA | <0.220 | NA | <0.670 | NA | <0.780 | NA | <1.5 | NA | <1.0 | NA | NA |
| NAPHTHALENE | mg/kg | 4 | 40 | 500 | 40 | 1000 | 0.400 | NA | <0.210 | NA | 28 | NA | <0.220 | NA | <0.670 | NA | <0.780 | NA | <1.5 | NA | <1.0 | NA | NA |
| **Inorganics** | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL CHROMIUM[2] | mg/kg | 30 | 30 | 30 | 200 | 200 | 8.2 | 11 | 9.3 | 46 | 7.6 | 48 | 8.6 | 12 | 94.0 | 30 | 39.0 | 9.0 | 12.0 | 130 | 12.0 | 6.4 | 6.2 |
| TRIVALENT CHROMIUM | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | NA[3] | 11 | NA[3] | 46 | NA[3] | 48 | NA[3] | 12 | NA[3] | 30 | NA[3] | 9.0 | NA[3] | 130 | NA[3] | 6.4 | 6.2 |
| HEXAVALENT CHROMIUM | mg/kg | 30 | 30 | 30 | 200 | 200 | <1.3[3] | <0.39 | <1.1[3] | <0.52 | <1.5[3] | <0.61 | <1.1[3] | <7.8 | <1.6[3] | <1.1 | <1.8[3] | <0.40 | <2.2[3] | <1.0 | <1.6[3] | <1.1 | <0.41 |
| LEAD | mg/kg | 300 | 300 | 300 | 300 | 300 | 21 | NA | 20 | NA | 160 | NA | 51 | NA | 200 | NA | 200 | NA | 730 | NA | 51 | NA | NA |
| **General Chemistry** | | | | | | | | | | | | | | | | | | | | | | | |
| pH | pH units | NS | NS | NS | NS | NS | 7.4 | 7.8 | 7.8 | 7.8 | 8.4 | 7.8 | 8.3 | 7.6 | 7.9 | 7.4 | 8.2 | 7.1 | 8.0 | 7.2 | 7.9 | 7.4 | 7.3 |
| ORP | mV | NS | NS | NS | NS | NS | 180 | 86 | 220 | 83 | 170 | 100 | 170 | 98 | 220 | 78 | 200 | 66 | 210 | 82 | 220 | 86 | 83 |
| PERCENT SOLIDS | % weight | NS | NS | NS | NS | NS | NA | 80.1 | NA | 61.2 | NA | 52.1 | NA | 50.3 | NA | 68.8 | NA | 77.2 | NA | 75.1 | NA | 72.1 | 77.0 |

QA/QC by LEM 6/7/12; JRS 8/22/12

**Abbreviations:**
EPH = Extractable Petroleum Hydrocarbons
TPH = Total Petroleum Hydrocarbons
VPH = Volatile Petroleum Hydrocarbons
mg/kg = milligrams per kilogram
mV = millivolts
NS = No Standard
NA = Not Analyzed
RC = Reportable Concentration
ORP = Oxidation/Reduction Potential

**Notes:**
* = Reported result is an estimated concentration.
< = indicates parameter not detected above laboratory method reporting limit, shown
1 = Standards are from the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000, revised June 26, 2009
2 = Total Chromium standard applies only in the absence of chromium speciation
3 = Laboratory results for hexavalent chromium are considered invalid due to holding time non-conformances; therefore, results are compared to the Total Chromium standard
4 = Standard is for mixed isomers, MassDEP does not publish standards for individual isomers
5 = Standards are from the MassDEP website updated February 2008
6 = Reporting limits exceed the RC S-1 standard
7 = Reporting limits exceed the applicable Method 1 standard and the RC S-1 standard

**Table 1d**
**Weston & Sampson**
**Summary of Soil Analytical Results**
**45 Cove Street**
**New Bedford, MA**
**April, May, August 2012**

| Parameters | Units | MassDEP Reportable Concentrations[5] | Method 1 Soil Standards[1] | | | | Sampling Location, Depth, and Date | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RC S-1 | S-1/GW2 | S-1/GW3 | S-2/GW2 | S-2/GW3 | TP-8N 0-3 ft 5/7/12 | TP-8N 0-3 ft 8/9/12 | TP-8S 0-3 ft 5/7/12 | TP-8S 0-3 ft 8/9/12 | TP-8E 0-3 ft 5/7/12 | TP-8E 0-3 ft 8/9/12 | TP-8W 0-3 ft 5/7/12 | TP-8W 0-3 ft 8/9/12 | TP-9N 0-3 ft 4/30/12 | TP-9N 0-3 ft 8/9/12 | TP-9S 0-3 ft 4/30/12 | TP-9S 0-3 ft 8/9/12 | TP-9E 0-3 ft 4/30/12 | TP-9E 0-3 ft 8/9/12 | TP-9W 0-3 ft 4/30/12 | TP-Dup 0-3 ft 4/30/12 | TP-9W 0-3 ft 8/9/12 |
| **TPH** | | | | | | | | | | | | | | | | | | | | | |
| UNADJUSTED TPH | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | 260 | NA | 290 * | NA | 390 * | NA | 440 * | NA | 660 * | NA | 990 * | NA | 180 * | NA | 320 * | 630 * | NA |
| **EPH** | | | | | | | | | | | | | | | | | | | | | |
| C9-C18 ALIPHATICS | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | NA | <14 | NA | 34 | NA | <13 | NA | <18 | NA | <14 | NA | <12 | NA | <14 | NA | NA | 310 |
| C19-C36 ALIPHATICS | mg/kg | 3000 | 3000 | 3000 | 5000 | 5000 | NA | 20 | NA | 250 | NA | <13 | NA | 23 | NA | 58 | NA | 18 | NA | 17 | NA | NA | 1100 |
| Unadjusted n-C11 to n-C22 AROMATICS | mg/kg | NS | NS | NS | NS | NS | NA | 33 | NA | 190 | NA | <13 | NA | 43 | NA | 130 | NA | 240 | NA | 41 | NA | NA | 2200 |
| C11-C22 AROMATICS | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | NA | 31 | NA | 160 | NA | <13 | NA | 43 | NA | 100 | NA | 140 | NA | 35 | NA | NA | 2000 |
| ACENAPHTHENE | mg/kg | 4 | 1000 | 1000 | 3000 | 3000 | NA | <0.14 | NA | <0.27 | NA | <0.13 | NA | <0.18 | NA | 0.28 | NA | 0.48 | NA | <0.14 | NA | NA | 2.0 |
| ACENAPHTHYLENE | mg/kg | 1 | 600 | 10 | 600 | 10 | NA | <0.14 | NA | <0.27 | NA | <0.13 | NA | <0.18 | NA | <0.14 | NA | 0.41 | NA | <0.14 | NA | NA | <0.73 |
| ANTHRACENE | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | NA | <0.14 | NA | 0.47 | NA | <0.13 | NA | <0.18 | NA | 0.58 | NA | 3.1 | NA | <0.14 | NA | NA | 5.3 |
| BENZO(A)ANTHRACENE | mg/kg | 7 | 7 | 7 | 40 | 40 | NA | 0.31 | NA | 5.6 | NA | <0.13 | NA | <0.18 | NA | 2.3 | NA | 6.8 | NA | 0.45 | NA | NA | 13 |
| BENZO(A)PYRENE | mg/kg | 2 | 2 | 2 | 4 | 4 | NA | 0.18 | NA | 2.1 | NA | <0.13 | NA | <0.18 | NA | 1.9 | NA | 6.1 | NA | 0.46 | NA | NA | 12 |
| BENZO(B)FLUORANTHENE | mg/kg | 7 | 7 | 7 | 40 | 40 | NA | 0.24 | NA | 3.0 | NA | <0.13 | NA | <0.18 | NA | 2.9 | NA | 8.3 | NA | 0.64 | NA | NA | 16 |
| BENZO(G,H,I)PERYLENE | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | NA | <0.14 | NA | 1.4 | NA | <0.13 | NA | <0.18 | NA | <0.14 | NA | 5.5 | NA | <0.14 | NA | NA | 4.6 |
| BENZO(K)FLUORANTHENE | mg/kg | 70 | 70 | 70 | 400 | 400 | NA | <0.14 | NA | 1.1 | NA | <0.13 | NA | <0.18 | NA | 0.98 | NA | 3.1 | NA | 0.21 | NA | NA | 6.3 |
| CHRYSENE | mg/kg | 70 | 70 | 70 | 400 | 400 | NA | 0.25 | NA | 2.8 | NA | <0.13 | NA | <0.18 | NA | 2.4 | NA | 7.2 | NA | 0.54 | NA | NA | 13 |
| DIBENZ(A,H)ANTHRACENE | mg/kg | 0.7 | 0.7 | 0.7 | 4 | 4 | NA | <0.14 | NA | 0.41 | NA | <0.13 | NA | <0.18 | NA | 0.39 | NA | 0.95 | NA | <0.14 | NA | NA | 2.0 |
| FLUORANTHENE | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | NA | 0.38 | NA | 4.3 | NA | <0.13 | NA | <0.18 | NA | 5.2 | NA | 19 | NA | 1.0 | NA | NA | 38 |
| FLUORENE | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | NA | <0.14 | NA | 0.30 | NA | <0.13 | NA | <0.18 | NA | 0.36 | NA | 1.2 | NA | <0.14 | NA | NA | 3.1 |
| INDENO(1,2,3-CD)PYRENE | mg/kg | 7 | 7 | 7 | 40 | 40 | NA | <0.14 | NA | 1.4 | NA | <0.13 | NA | <0.18 | NA | 1.4 | NA | 4.3 | NA | 0.36 | NA | NA | 5.8 |
| 2-METHYLNAPHTHALENE | mg/kg | 0.7 | 80 | 300 | 80 | 500 | NA | <0.14 | NA | <0.27 | NA | <0.13 | NA | <0.18 | NA | <0.14 | NA | <0.12 | NA | <0.14 | NA | NA | <0.73 [6] |
| NAPHTHALENE | mg/kg | 4 | 40 | 500 | 40 | 1000 | NA | <0.14 | NA | <0.27 | NA | <0.13 | NA | <0.18 | NA | <0.14 | NA | <0.12 | NA | <0.14 | NA | NA | 0.81 |
| PHENANTHRENE | mg/kg | 10 | 500 | 500 | 1000 | 1000 | NA | 0.27 | NA | 2.8 | NA | <0.13 | NA | <0.18 | NA | 2.6 | NA | 14 | NA | 0.66 | NA | NA | 34 |
| PYRENE | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | NA | 0.36 | NA | 4.3 | NA | <0.13 | NA | 0.39 | NA | 4.8 | NA | 17 | NA | 0.97 | NA | NA | 40 |
| **VPH** | | | | | | | | | | | | | | | | | | | | | |
| C5-C8 ALIPHATICS | mg/kg | 100 | 100 | 100 | 500 | 500 | <14 | NA | <12 | NA | <26 | NA | <22 | NA | <9.2 | NA | <78 | NA | <6.3 | NA | <5.9 | <5.3 | NA |
| C9-C12 ALIPHATICS | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | <14 | NA | <12 | NA | <26 | NA | <22 | NA | <9.2 | NA | <78 | NA | 23 | NA | <5.9 | <5.3 | NA |
| C9-C10 AROMATICS | mg/kg | 100 | 100 | 100 | 500 | 500 | <14 | NA | <12 | NA | <26 | NA | <22 | NA | <9.2 | NA | <78 | NA | 12 | NA | <5.9 | <5.3 | NA |
| MTBE | mg/kg | 0.1 | 100 | 100 | 100 | 500 | <0.140 | NA | <0.120 | NA | <0.260 | NA | <0.220 | NA | <0.092 | NA | <0.780 | NA | <0.063 | NA | <0.059 | <0.053 | NA |
| BENZENE | mg/kg | 2 | 30 | 30 | 200 | 200 | <0.720 | NA | <0.620 | NA | <1.3 | NA | <1.1 | NA | <0.460 | NA | <3.9 | NA | <0.310 | NA | <0.300 | <0.270 | NA |
| TOLUENE | mg/kg | 30 | 500 | 500 | 1000 | 1000 | <0.720 | NA | <0.620 | NA | <1.3 | NA | <1.1 | NA | <0.460 | NA | <3.9 | NA | <0.310 | NA | <0.300 | <0.270 | NA |
| ETHYLBENZENE | mg/kg | 40 | 500 | 500 | 1000 | 1000 | <0.720 | NA | <0.620 | NA | <1.3 | NA | <1.1 | NA | <0.460 | NA | <3.9 | NA | <0.310 | NA | <0.300 | <0.270 | NA |
| M,P- XYLENES | mg/kg | 300 [4] | 300 [4] | 500 [4] | 300 [4] | 1000 [4] | <0.720 | NA | <0.620 | NA | <1.3 | NA | <1.1 | NA | <0.460 | NA | <3.9 | NA | <0.310 | NA | 0.5 | <0.270 | NA |
| O-XYLENE | mg/kg | | | | | | <0.720 | NA | <0.620 | NA | <1.3 | NA | <1.1 | NA | <0.460 | NA | <3.9 | NA | <0.310 | NA | <0.300 | <0.270 | NA |
| NAPHTHALENE | mg/kg | 4 | 40 | 500 | 40 | 1000 | <0.720 | NA | <0.620 | NA | <1.3 | NA | <1.1 | NA | <0.460 | NA | <3.9 | NA | <0.310 | NA | <0.300 | <0.270 | NA |
| **Inorganics** | | | | | | | | | | | | | | | | | | | | | |
| TOTAL CHROMIUM[2] | mg/kg | 30 | 30 | 30 | 200 | 200 | 18.0 | 11.0 | 28.0 | 36.0 | 15.0 | 11.0 | 9.9 | 20.0 | 28.0 | 25.0 | 8.4 | 11.0 | 13.0 | 10.0 | 10.0 | 12.0 | 170.0 |
| TRIVALENT CHROMIUM | mg/kg | 1000 | 1000 | 1000 | 3000 | 3000 | NA[3] | 11.0 | NA[3] | 36.0 | NA[3] | 11.0 | NA[3] | 20.0 | NA[3] | 25.0 | NA[3] | 11.0 | NA[3] | 10.0 | NA[3] | NA[3] | 170.0 |
| HEXAVALENT CHROMIUM | mg/kg | 30 | 30 | 30 | 200 | 200 | <1.9[3] | <0.44 | <1.9[3] | <0.44 | <2.8[3] | 1.0 | <1.5[3] | <1.4 | <1.4[3] | <1.1 | <5.7[3] | <0.98 | <1.2[3] | <1.1 | <1.2[3] | <1.2[3] | <0.46 |
| LEAD | mg/kg | 300 | 300 | 300 | 300 | 300 | 15 | NA | 120 | NA | 50 | NA | 31 | NA | 120 | NA | 9.4 | NA | 58 | NA | 25 | 33 | NA |
| **General Chemistry** | | | | | | | | | | | | | | | | | | | | | |
| pH | pH units | NS | NS | NS | NS | NS | 8.2 | 7.8 | 8.4 | 7.8 | 8.3 | 8.0 | 8.6 | 8.1 | 7.7 | 7.4 | 7.8 | 7.9 | 9.1 | 7.8 | 9.1 | 9.2 | 7.4 |
| ORP | mV | NS | NS | NS | NS | NS | 200 | 96 | 190 | 110 | 190 | 100 | 190 | 100 | 240 | 68 | 260 | 90 | 190 | 89 | 190 | 170 | 76 |
| PERCENT SOLIDS | % weight | NS | NS | NS | NS | NS | NA | 71.4 | NA | 35.9 | NA | 78.5 | NA | 54.8 | NA | 72.2 | NA | 81.3 | NA | 71.6 | NA | NA | 68 |

QA/QC by LEM 6/7/12; JRS 8/22/12

**Abbreviations:**
EPH = Extractable Petroleum Hydrocarbons
TPH = Total Petroleum Hydrocarbons
VPH = Volatile Petroleum Hydrocarbons
mg/kg = milligrams per kilogram
mV = millivolts
NS = No Standard
NA = Not Analyzed
RC = Reportable Concentration
ORP = Oxidation/Reduction Potential

**Notes:**
* = Reported result is an estimated concentration.
< = indicates parameter not detected above laboratory method reporting limit, shown
1 = Standards are from the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000, revised June 26, 2009
2 = Total Chromium standard applies only in the absence of chromium speciation
3 = Laboratory results for hexavalent chromium are considered invalid due to holding time non-conformances; therefore, results are compared to the Total Chromium standard
4 = Standard is for mixed isomers, MassDEP does not publish standards for individual isomers
5 = Standards are from the MassDEP website updated February 2008
6 = Reporting limits exceed the RC S-1 standard
7 = Reporting limits exceed the applicable Method 1 standard and the RC S-1 standard

**Table 2a**
**Weston & Sampson**
**Summary of Groundwater Analytical Results**
**45 Cove Street**
**New Bedford, MA**

| Parameters | Units | MCP RCGW-2 Standards | MCP Method 1 Groundwater Cleanup Standards | | Sample ID and Date | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | GW-2 | GW-3 | MW-1 4/29/11 | MW-2 4/29/11 | MW-4 4/28/11 | MW-5 4/29/11 | MW-6 4/28/11 | WS-1 4/29/11 | DUP-1 (WS-1) 4/29/11 | WS-3 4/29/11 | WS-4 4/29/11 | WS-7 4/28/11 | WS-8 4/29/11 | WS-9 4/28/11 | WS-11 4/28/11 | WS-13 4/28/11 | WS-14 4/28/11 | WS-15 4/28/11 |
| **EPH** | | | | | | | | | | | | | | | | | | | |
| C9-C18 Aliphatics | mg/kg | 5 | 5 | 50 | <0.14 | <0.2 | <0.12 | <0.2 | <0.15 | <0.2 | <0.2 | <0.2 | <0.13 | <0.15 | 0.87 | <0.16 | <0.16 | <0.15 | <0.15 | <0.15 |
| C19-C36 Aliphatics | mg/kg | 50 | NS | 50 | <0.14 | <0.2 | <0.12 | <0.2 | <0.15 | <0.2 | <0.2 | <0.2 | <0.13 | <0.15 | 0.72 | <0.16 | <0.16 | <0.15 | <0.15 | <0.15 |
| C11-C22 Aromatics | mg/kg | 5 | 50 | 5 | <0.14 | <0.2 | <0.12 | <0.2 | <0.15 | <0.2 | <0.2 | <0.2 | <0.13 | <0.15 | 0.48 | <0.16 | <0.16 | <0.15 | <0.15 | <0.15 |
| Unadjusted n-C11 to n-C22 Aromat | mg/kg | NS | NS | NS | <0.14 | <0.2 | <0.12 | <0.2 | <0.15 | <0.2 | <0.2 | <0.2 | <0.13 | <0.15 | 0.51 | <0.16 | <0.16 | <0.15 | <0.15 | <0.15 |
| **PAHs** | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | | 6 | NS | 6 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| Benzo(a)anthracene | mg/kg | 1 | NS | 1.0 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0003 | <0.0001 | <0.0001 | 0.0002 | <0.0001 | 0.0002 | <0.0001 | <0.0001 | <0.0001 |
| Benzo(a)pyrene | mg/kg | 0.5 | NS | 0.5 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0003 | <0.0001 | <0.0001 | 0.0002 | <0.0001 | 0.0002 | <0.0001 | <0.0001 | <0.0001 |
| Benzo(b)fluoranthene | mg/kg | 0.4 | NS | 0.4 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0005 | <0.0001 | <0.0001 | 0.0004 | <0.0001 | <0.0005 | 0.0004 | <0.0001 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| Benzo(g,h,i)perylene | mg/kg | 0.02 | NS | 0.02 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0005 | <0.0001 | <0.0001 | 0.0002 | <0.0001 | <0.0005 | 0.0002 | <0.0001 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| Benzo(k)fluoranthene | mg/kg | 0.1 | NS | 0.1 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0005 | <0.0001 | <0.0001 | 0.0001 | <0.0001 | <0.0005 | 0.0001 | <0.0001 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| Chrysene | mg/kg | 0.07 | NS | 0.07 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0003 | <0.0001 | <0.0001 | 0.0002 | <0.0001 | 0.0002 | <0.0001 | <0.0001 | <0.0001 |
| Fluoranthene | mg/kg | 0.2 | NS | 0.2 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0006 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0005 | <0.0005 | <0.0005 | <0.0005 |
| Indeno(1,2,3-cd) Pyrene | mg/kg | 0.1 | NS | 0.1 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0002 | <0.0001 | <0.0001 | 0.0002 | <0.0001 | 0.0002 | <0.0001 | <0.0001 | <0.0001 |
| 2-Methylnaphthalene | mg/kg | 2 | 2 | 20 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0006 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| Naphthalene | mg/kg | 1.0 | 1 | 20 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.011 | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| Pyrene | mg/kg | 0.02 | NS | 0.02 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| **VPH** | | | | | | | | | | | | | | | | | | | | |
| C5-C8 Aliphatics | mg/kg | 3 | 3 | 50 | <0.02 | <0.02 | <0.020 | <0.02 | <0.020 | <0.02 | <0.02 | <0.02 | <0.02 | <0.020 | <0.04 | <0.020 | 0.02 | <0.020 | 0.04 | <0.020 |
| C9-C12 Aliphatics | mg/kg | 5 | 5 | 50 | <0.02 | <0.02 | <0.020 | <0.02 | <0.020 | 0.033 | 0.031 | <0.02 | <0.02 | 0.035 | 0.54 | 0.037 | <0.020 | <0.020 | 0.027 | <0.020 |
| C9-C10 Aromatics | mg/kg | 7 | 7 | 50 | <0.02 | <0.02 | <0.020 | <0.02 | <0.020 | 0.028 | 0.027 | <0.02 | <0.02 | 0.026 | 0.99 | 0.025 | <0.020 | <0.020 | 0.029 | <0.020 |
| Unadjusted C5-C8 Aliphatics | mg/kg | NS | NS | NS | <0.02 | <0.02 | <0.020 | <0.02 | <0.020 | <0.02 | <0.02 | <0.02 | <0.02 | 0.02 | <0.04 | <0.020 | 0.021 | <0.020 | 0.042 | <0.020 |
| Unadjusted C9-C12 Aliphatics | mg/kg | NS | NS | NS | <0.02 | <0.02 | <0.020 | <0.02 | <0.020 | 0.061 | 0.059 | 0.033 | 0.024 | 0.063 | 1.6 | 0.062 | 0.035 | <0.020 | 0.059 | 0.022 |
| **Target VOCs** | | | | | | | | | | | | | | | | | | | | |
| Benzene | mg/kg | 2 | 2 | 10 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.002 | <0.001 | <0.001 | <0.002 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Total Xylenes | mg/kg | 5 | 9 | 5 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | 0.017 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 |
| Naphthalene | mg/kg | 1 | 1 | 20 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.023 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| **VOCs 8260** | | | | | | | | | | | | | | | | | | | | |
| Acetone | mg/kg | 50 | 50 | 50 | 0.19 | <0.01 | <0.01 | <0.01 | <0.01 | 0.026 | 0.023 | 0.011 | 0.13 | 0.016 | <0.1 | 0.073 | 0.046 | 0.016 | 0.14 | 0.022 |
| Chloromethane | mg/kg | NS | NS | NS | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0057 | <0.0005 | <0.0005 | <0.005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 2-Butanone | mg/kg | 50 | 50 | 50 | 0.0071 | <0.005 | <0.005 | <0.005 | <0.005 | 0.0061 | <0.005 | <0.005 | 0.0055 | <0.005 | <0.05 | 0.0065 | 0.0093 | <0.005 | 0.021 | <0.005 |
| Benzene | mg/kg | 2 | 2 | 10 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0018 | <0.0005 | <0.0005 | <0.005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 2-Hexanone | mg/kg | NS | NS | NS | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.05 | <0.005 | 0.018 | <0.005 | 0.0091 | <0.005 |
| 4-Isopropyltoluene | mg/kg | NS | NS | NS | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0064 | 0.0016 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| Isopropylbenzene | mg/kg | NS | NS | NS | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.032 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| Naphthalene | mg/kg | 1 | 1 | 20 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.023 | 0.0011 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| N-Propylbenzene | mg/kg | NS | NS | NS | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.017 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| sec-Butylbenzene | mg/kg | NS | NS | NS | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.016 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| 1,2,4-Trimethylbenzene | mg/kg | NS | NS | NS | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.51 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| Toluene | mg/kg | 40 | 50 | 40 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.00056 | <0.0005 | <0.0005 | <0.005 | 0.00051 | 0.00064 | <0.0005 | 0.0016 | 0.00069 |
| Total Xylenes | mg/kg | 5 | 9 | 5 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.013 | <0.0005 | <0.0005 | <0.0005 | 0.00055 | <0.0005 |
| 1,3,5-Trimethylbenzene | mg/kg | NS | NS | NS | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.044 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| **Trace Metals** | | | | | | | | | | | | | | | | | | | | |
| Arsenic | mg/kg | 0.9 | NS | 0.9 | <0.01 | <0.01 | 0.02 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Barium | mg/kg | 50 | NS | 50 | 0.14 | 0.11 | 0.40 | <0.05 | <0.05 | 0.21 | 0.22 | 0.08 | 0.23 | 0.11 | 0.06 | 0.34 | <0.05 | <0.05 | <0.05 | <0.05 |
| Cadmium | mg/kg | 0.004 | NS | 0.004 | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 | <0.004 |
| Chromium | mg/kg | 0.3 | NS | 0.3 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.03 | <0.01 | <0.01 | <0.01 |
| Mercury | mg/kg | 0.02 | NS | 0.02 | <0.0002 | 0.0003 | <0.0002 | 0.0002 | <0.0002 | <0.0002 | 0.0003 | 0.0002 | 0.0003 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 |
| Selenium | mg/kg | 0.1 | NS | 0.1 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Silver | mg/kg | 0.007 | NS | 0.007 | <0.007 | <0.007 | 0.039 | <0.007 | <0.007 | 0.012 | 0.014 | <0.007 | 0.014 | <0.007 | 0.018 | <0.007 | <0.007 | <0.007 | <0.007 | <0.007 |

QC by LEM 5/31/11

**Abbreviations:**
SVOCs = Semi-Volatile Organic Compounds
EPH = Extractable Petroleum Hydrocarbons
VPH = Volatile Petroleum Hydrocarbons
VOCs = Volatile Organic Compounds
PCBs = Polychlorinated Biphenyls
mg/kg = milligrams per kilogram
NS = No Standard
NA = Not Analyzed

**Notes:**
Lab ID: 141550 & 141577
Standards are from the Massachusetts Contingency Plan (MCP),
310 CMR 40.0000, revised February 14, 2008.
< = indicates parameter not detected above laboratory method reporting limit, shown

**Table 2b**
**Weston & Sampson**
**Summary of Groundwater Analytical Results**
**45 Cove Street**
**New Bedford, MA**
**April 16, 2012**

| Parameter | Units | Method 1 GW-1 Standard (1) | Method 1 GW-2 Standard (1) | Method 1 GW-3 Standard (1) | Monitoring Wells | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | WS-4 | WS-4 (DUP-1) | MW-4 | WS-1 | WS-8 |
| **Dissolved Metals** | | | | | | | | | |
| Silver | mg/L | 100 | NS | 0.007 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 |

QC by EN

O:\New Bedford - Cove St\Cove St\Reports\Phase I Site Investigation & Tier Classification\Tables\[Table 2b - Groundwater Analytical Results REV JSC.xls]Sheet1

**Abbreviations:**

mg/L = milligrams per liter
NS = no standard

**Notes:**

**CP BRODEUR, INC.**

**RTN: 4-23643**

**TABLE 1**
**Summary of Polychlorinated Biphenyl and Extractable Petroleum Hydrocarbon Soil Sampling Results**
**80 Wright Street, New Bedford, MA**

| Location | | A01 | A02 | A02 | A02 | A02 | A02 | A03 | A04 |
|---|---|---|---|---|---|---|---|---|---|
| Ramboll Sample ID | | SO-A01-0-1 | SO-A02-0-1 | SO-A02-0-2 | SO-A02-2-4 | SO-A02-4-6 | SO-A02-6-8 | SO-A03-0-1 | SO-A04-0-1 |
| Collection Depth (ft bgs) | MCP | 0 - 1 | 0 - 1 | 0 - 2 | 2 - 4 | 4 - 6 | 6 - 8 | 0 - 1 | 0 - 1 |
| Sample Method | RCS-2 | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push |
| Sample Date | | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 |
| Comments | | | | | | | | | |
| **PCBs analyzed via EPA Method SW8082** | | | | | | | | | |
| PCBs (total) | 4 | ND (0.069) | 0.11 (0.069) | ND (0.071) | ND (0.073) | ND (0.073) | ND (0.096) | 0.12 (0.067) | ND (0.07) |
| Aroclor-1016 | NE | ND (0.069) | ND (0.069) | ND (0.071) | ND (0.073) | ND (0.073) | ND (0.096) | ND (0.067) | ND (0.07) |
| Aroclor-1221 | NE | ND (0.069) | ND (0.069) | ND (0.071) | ND (0.073) | ND (0.073) | ND (0.096) | ND (0.067) | ND (0.07) |
| Aroclor-1232 | NE | ND (0.069) | ND (0.069) | ND (0.071) | ND (0.073) | ND (0.073) | ND (0.096) | ND (0.067) | ND (0.07) |
| Aroclor-1242 | NE | ND (0.069) | ND (0.069) | ND (0.071) | ND (0.073) | ND (0.073) | ND (0.096) | ND (0.067) | ND (0.07) |
| Aroclor-1248 | NE | ND (0.069) | ND (0.069) | ND (0.071) | ND (0.073) | ND (0.073) | ND (0.096) | ND (0.067) | ND (0.07) |
| Aroclor-1254 | NE | ND (0.069) | 0.11 (0.069) | ND (0.071) | ND (0.073) | ND (0.073) | ND (0.096) | 0.12 (0.067) | ND (0.07) |
| Aroclor-1260 | NE | ND (0.069) | ND (0.069) | ND (0.071) | ND (0.073) | ND (0.073) | ND (0.096) | ND (0.067) | ND (0.07) |
| Aroclor-1262 | NE | ND (0.069) | ND (0.069) | ND (0.071) | ND (0.073) | ND (0.073) | ND (0.096) | ND (0.067) | ND (0.07) |
| Aroclor-1268 | NE | ND (0.069) | ND (0.069) | ND (0.071) | ND (0.073) | ND (0.073) | ND (0.096) | ND (0.067) | ND (0.07) |
| **PAHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| Acenaphthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | 10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | 7 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenz(a,h)anthracene | 4 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 80 | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 20 | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| **EPHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| C19-C36 Aliphatics | 5,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C9-C18 Aliphatic Hydrocarbons | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Adjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Unadjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Petroleum Hydrocarbons (Extractable) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |

**Notes:**
1 All concentrations are presented in mg/kg.
2 No concentrations exceed the MCP RCS-2 criteria, dated April 25, 2014.

**Abbreviations:**
EPH -- Extractable Petroleum Hydrocarbon
ND -- Not Detected.
NE -- Not Established.
NA -- Not Analyzed.
PAH -- Polycyclic Aromatic Hydrocarbon
PCB -- Polychlorinated Biphenyl
( ) -- Detection Limit.

**TABLE 1**
**Summary of Polychlorinated Biphenyl and Extractable Petroleum Hydrocarbon Soil Sampling Results**
**80 Wright Street, New Bedford, MA**

| Location | | A05 | A06 | A07 | A08 | A09 | A10 | B01 | B01 |
|---|---|---|---|---|---|---|---|---|---|
| Ramboll Sample ID | | SO-A05-0-1 | SO-A06-0-1 | SO-A07-0-1 | SO-A08-0-1 | SO-A09-0-1 | SO-A10-0-1 | SO-B01-0-1 | DUP-5 |
| Collection Depth (ft bgs) | MCP | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 |
| Sample Method | RCS-2 | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push |
| Sample Date | | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 |
| Comments | | | | | | | | | Field Duplicate |
| **PCBs analyzed via EPA Method SW8082** | | | | | | | | | |
| PCBs (total) | 4 | ND (0.07) | ND (0.07) | ND (0.072) | ND (0.067) | ND (0.069) | ND (0.069) | ND (0.068) | ND (0.068) |
| Aroclor-1016 | NE | ND (0.07) | ND (0.07) | ND (0.072) | ND (0.067) | ND (0.069) | ND (0.069) | ND (0.068) | ND (0.068) |
| Aroclor-1221 | NE | ND (0.07) | ND (0.07) | ND (0.072) | ND (0.067) | ND (0.069) | ND (0.069) | ND (0.068) | ND (0.068) |
| Aroclor-1232 | NE | ND (0.07) | ND (0.07) | ND (0.072) | ND (0.067) | ND (0.069) | ND (0.069) | ND (0.068) | ND (0.068) |
| Aroclor-1242 | NE | ND (0.07) | ND (0.07) | ND (0.072) | ND (0.067) | ND (0.069) | ND (0.069) | ND (0.068) | ND (0.068) |
| Aroclor-1248 | NE | ND (0.07) | ND (0.07) | ND (0.072) | ND (0.067) | ND (0.069) | ND (0.069) | ND (0.068) | ND (0.068) |
| Aroclor-1254 | NE | ND (0.07) | ND (0.07) | ND (0.072) | ND (0.067) | ND (0.069) | ND (0.069) | ND (0.068) | ND (0.068) |
| Aroclor-1260 | NE | ND (0.07) | ND (0.07) | ND (0.072) | ND (0.067) | ND (0.069) | ND (0.069) | ND (0.068) | ND (0.068) |
| Aroclor-1262 | NE | ND (0.07) | ND (0.07) | ND (0.072) | ND (0.067) | ND (0.069) | ND (0.069) | ND (0.068) | ND (0.068) |
| Aroclor-1268 | NE | ND (0.07) | ND (0.07) | ND (0.072) | ND (0.067) | ND (0.069) | ND (0.069) | ND (0.068) | ND (0.068) |
| **PAHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| Acenaphthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | 10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | 7 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenz(a,h)anthracene | 4 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 80 | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 20 | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| **EPHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| C19-C36 Aliphatics | 5,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C9-C18 Aliphatic Hydrocarbons | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Adjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Unadjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Petroleum Hydrocarbons (Extractable) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |

**Notes:**

1 All concentrations are presented in mg/kg.

2 No concentrations exceed the MCP RCS-2 criteria, dated April 25, 2014.

**Abbreviations:**

EPH -- Extractable Petroleum Hydrocarbon

ND -- Not Detected.

NE -- Not Established.

NA -- Not Analyzed.

PAH -- Polycyclic Aromatic Hydrocarbon

PCB -- Polychlorinated Biphenyl

( ) -- Detection Limit.

**TABLE 1**
**Summary of Polychlorinated Biphenyl and Extractable Petroleum Hydrocarbon Soil Sampling Results**
**80 Wright Street, New Bedford, MA**

| Location | | B02 | B04 | B05 | B06 | B07 | B08 | B09 | B10 |
|---|---|---|---|---|---|---|---|---|---|
| Ramboll Sample ID | | SO-B02-0-1 | SO-B04-0-1 | SO-B05-0-1 | SO-B06-0-1 | SO-B07-0-1 | SO-B08-0-1 | SO-B09-0-1 | SO-B10-0-1 |
| Collection Depth (ft bgs) | MCP | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 |
| Sample Method | RCS-2 | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push |
| Sample Date | | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 |
| Comments | | | | | | | | | |
| **PCBs analyzed via EPA Method SW8082** | | | | | | | | | |
| PCBs (total) | 4 | ND (0.073) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.071) | ND (0.071) | ND (0.071) |
| Aroclor-1016 | NE | ND (0.073) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.071) | ND (0.071) | ND (0.071) |
| Aroclor-1221 | NE | ND (0.073) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.071) | ND (0.071) | ND (0.071) |
| Aroclor-1232 | NE | ND (0.073) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.071) | ND (0.071) | ND (0.071) |
| Aroclor-1242 | NE | ND (0.073) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.071) | ND (0.071) | ND (0.071) |
| Aroclor-1248 | NE | ND (0.073) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.071) | ND (0.071) | ND (0.071) |
| Aroclor-1254 | NE | ND (0.073) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.071) | ND (0.071) | ND (0.071) |
| Aroclor-1260 | NE | ND (0.073) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.071) | ND (0.071) | ND (0.071) |
| Aroclor-1262 | NE | ND (0.073) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.071) | ND (0.071) | ND (0.071) |
| Aroclor-1268 | NE | ND (0.073) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.068) | ND (0.071) | ND (0.071) | ND (0.071) |
| **PAHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| Acenaphthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | 10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | 7 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenz(a,h)anthracene | 4 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 80 | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 20 | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| **EPHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| C19-C36 Aliphatics | 5,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C9-C18 Aliphatic Hydrocarbons | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Adjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Unadjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Petroleum Hydrocarbons (Extractable) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |

**Notes:**
1 All concentrations are presented in mg/kg.
2 No concentrations exceed the MCP RCS-2 criteria, dated April 25, 2014.

**Abbreviations:**
EPH -- Extractable Petroleum Hydrocarbon
ND -- Not Detected.
NE -- Not Established.
NA -- Not Analyzed.
PAH -- Polycyclic Aromatic Hydrocarbon
PCB -- Polychlorinated Biphenyl
( ) -- Detection Limit.

**TABLE 1**
**Summary of Polychlorinated Biphenyl and Extractable Petroleum Hydrocarbon Soil Sampling Results**
**80 Wright Street, New Bedford, MA**

| Location | | C01 | C02 | C04 | C05 | C06 | C07 | C07 | C07 |
|---|---|---|---|---|---|---|---|---|---|
| Ramboll Sample ID | | SO-C01-0-1 | SO-C02-0-1 | SO-C04-0-1 | SO-C05-0-1 | SO-C06-0-1 | SO-C07-0-1 | SO-C07-0-2 | SO-C07-2-4 |
| Collection Depth (ft bgs) | MCP | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 2 | 2 - 4 |
| Sample Method | RCS-2 | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push |
| Sample Date | | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 |
| Comments | | | | | | | | | |
| **PCBs analyzed via EPA Method SW8082** | | | | | | | | | |
| PCBs (total) | 4 | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.07) | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.071) |
| Aroclor-1016 | NE | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.07) | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.071) |
| Aroclor-1221 | NE | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.07) | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.071) |
| Aroclor-1232 | NE | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.07) | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.071) |
| Aroclor-1242 | NE | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.07) | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.071) |
| Aroclor-1248 | NE | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.07) | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.071) |
| Aroclor-1254 | NE | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.07) | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.071) |
| Aroclor-1260 | NE | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.07) | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.071) |
| Aroclor-1262 | NE | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.07) | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.071) |
| Aroclor-1268 | NE | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.07) | ND (0.067) | ND (0.068) | ND (0.068) | ND (0.071) |
| **PAHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| Acenaphthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | 10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | 7 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenz(a,h)anthracene | 4 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 80 | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 20 | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| **EPHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| C19-C36 Aliphatics | 5,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C9-C18 Aliphatic Hydrocarbons | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Adjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Unadjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Petroleum Hydrocarbons (Extractable) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |

**Notes:**
1 All concentrations are presented in mg/kg.
2 No concentrations exceed the MCP RCS-2 criteria, dated April 25, 2014.

**Abbreviations:**
EPH -- Extractable Petroleum Hydrocarbon
ND -- Not Detected.
NE -- Not Established.
NA -- Not Analyzed.
PAH -- Polycyclic Aromatic Hydrocarbon
PCB -- Polychlorinated Biphenyl
( ) -- Detection Limit.

**TABLE 1**
**Summary of Polychlorinated Biphenyl and Extractable Petroleum Hydrocarbon Soil Sampling Results**
**80 Wright Street, New Bedford, MA**

| Location | | C07 | C07 | C08 | C09 | C09 | C09 | C09 | C09 |
|---|---|---|---|---|---|---|---|---|---|
| Ramboll Sample ID | | SO-C07-4-6 | SO-C07-6-8 | SO-C08-0-1 | SO-C09-0-1 | SO-C09-0-2 | SO-C09-2-4 | SO-C09-4-6 | SO-C09-6-8 |
| Collection Depth (ft bgs) | MCP | 4 - 6 | 6 - 8 | 0 - 1 | 0 - 1 | 0 - 2 | 2 - 4 | 4 - 6 | 6 - 8 |
| Sample Method | RCS-2 | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push |
| Sample Date | | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 |
| Comments | | | | | | | | | |
| **PCBs analyzed via EPA Method SW8082** | | | | | | | | | |
| PCBs (total) | 4 | ND (0.071) | 0.56 (0.072) | ND (0.071) | ND (0.075) | ND (0.071) | 0.52 (0.069) | 0.038 (0.034) | 0.12 (0.093) |
| Aroclor-1016 | NE | ND (0.071) | ND (0.072) | ND (0.071) | ND (0.075) | ND (0.071) | ND (0.069) | ND (0.034) | ND (0.093) |
| Aroclor-1221 | NE | ND (0.071) | ND (0.072) | ND (0.071) | ND (0.075) | ND (0.071) | ND (0.069) | ND (0.034) | ND (0.093) |
| Aroclor-1232 | NE | ND (0.071) | ND (0.072) | ND (0.071) | ND (0.075) | ND (0.071) | ND (0.069) | ND (0.034) | ND (0.093) |
| Aroclor-1242 | NE | ND (0.071) | ND (0.072) | ND (0.071) | ND (0.075) | ND (0.071) | ND (0.069) | ND (0.034) | ND (0.093) |
| Aroclor-1248 | NE | ND (0.071) | ND (0.072) | ND (0.071) | ND (0.075) | ND (0.071) | ND (0.069) | ND (0.034) | ND (0.093) |
| Aroclor-1254 | NE | ND (0.071) | 0.56 (0.072) | ND (0.071) | ND (0.075) | ND (0.071) | 0.52 (0.069) | 0.038 (0.034) | 0.12 (0.093) |
| Aroclor-1260 | NE | ND (0.071) | ND (0.072) | ND (0.071) | ND (0.075) | ND (0.071) | ND (0.069) | ND (0.034) | ND (0.093) |
| Aroclor-1262 | NE | ND (0.071) | ND (0.072) | ND (0.071) | ND (0.075) | ND (0.071) | ND (0.069) | ND (0.034) | ND (0.093) |
| Aroclor-1268 | NE | ND (0.071) | ND (0.072) | ND (0.071) | ND (0.075) | ND (0.071) | ND (0.069) | ND (0.034) | ND (0.093) |
| **PAHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| Acenaphthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | 10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | 7 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenz(a,h)anthracene | 4 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 80 | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 20 | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| **EPHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| C19-C36 Aliphatics | 5,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C9-C18 Aliphatic Hydrocarbons | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Adjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Unadjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Petroleum Hydrocarbons (Extractable) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |

**Notes:**

1 All concentrations are presented in mg/kg.

2 No concentrations exceed the MCP RCS-2 criteria, dated April 25, 2014.

**Abbreviations:**

EPH -- Extractable Petroleum Hydrocarbon
ND -- Not Detected.
NE -- Not Established.
NA -- Not Analyzed.
PAH -- Polycyclic Aromatic Hydrocarbon
PCB -- Polychlorinated Biphenyl
( ) -- Detection Limit.

**TABLE 1**
**Summary of Polychlorinated Biphenyl and Extractable Petroleum Hydrocarbon Soil Sampling Results**
**80 Wright Street, New Bedford, MA**

| Location | | C09 | C10 | D01 | D02 | D03 | D03 | D04 | D04 |
|---|---|---|---|---|---|---|---|---|---|
| Ramboll Sample ID | | DUP-6 | SO-C10-0-1 | SO-D01-0-1 | SO-D02-0-1 | SO-D03-0-1 | DUP-2 | SO-D04-0-1 | SO-D04-0-2 |
| Collection Depth (ft bgs) | MCP | 4 - 6 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 2 |
| Sample Method | RCS-2 | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push |
| Sample Date | | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 |
| Comments | | Field Duplicate | | | | | Field Duplicate | | |
| **PCBs analyzed via EPA Method SW8082** | | | | | | | | | |
| PCBs (total) | 4 | ND (0.069) | ND (0.07) | ND (0.069) | ND (0.069) | ND (0.069) | ND (0.067) | ND (0.068) | ND (0.068) |
| Aroclor-1016 | NE | ND (0.069) | ND (0.07) | ND (0.069) | ND (0.069) | ND (0.069) | ND (0.067) | ND (0.068) | ND (0.068) |
| Aroclor-1221 | NE | ND (0.069) | ND (0.07) | ND (0.069) | ND (0.069) | ND (0.069) | ND (0.067) | ND (0.068) | ND (0.068) |
| Aroclor-1232 | NE | ND (0.069) | ND (0.07) | ND (0.069) | ND (0.069) | ND (0.069) | ND (0.067) | ND (0.068) | ND (0.068) |
| Aroclor-1242 | NE | ND (0.069) | ND (0.07) | ND (0.069) | ND (0.069) | ND (0.069) | ND (0.067) | ND (0.068) | ND (0.068) |
| Aroclor-1248 | NE | ND (0.069) | ND (0.07) | ND (0.069) | ND (0.069) | ND (0.069) | ND (0.067) | ND (0.068) | ND (0.068) |
| Aroclor-1254 | NE | ND (0.069) | ND (0.07) | ND (0.069) | ND (0.069) | ND (0.069) | ND (0.067) | ND (0.068) | ND (0.068) |
| Aroclor-1260 | NE | ND (0.069) | ND (0.07) | ND (0.069) | ND (0.069) | ND (0.069) | ND (0.067) | ND (0.068) | ND (0.068) |
| Aroclor-1262 | NE | ND (0.069) | ND (0.07) | ND (0.069) | ND (0.069) | ND (0.069) | ND (0.067) | ND (0.068) | ND (0.068) |
| Aroclor-1268 | NE | ND (0.069) | ND (0.07) | ND (0.069) | ND (0.069) | ND (0.069) | ND (0.067) | ND (0.068) | ND (0.068) |
| **PAHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| Acenaphthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | 10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | 7 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenz(a,h)anthracene | 4 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 80 | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 20 | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| **EPHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| C19-C36 Aliphatics | 5,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C9-C18 Aliphatic Hydrocarbons | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Adjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Unadjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Petroleum Hydrocarbons (Extractable) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |

**Notes:**

1 All concentrations are presented in mg/kg.

2 No concentrations exceed the MCP RCS-2 criteria, dated April 25, 2014.

**Abbreviations:**

EPH -- Extractable Petroleum Hydrocarbon
ND -- Not Detected.
NE -- Not Established.
NA -- Not Analyzed.
PAH -- Polycyclic Aromatic Hydrocarbon
PCB -- Polychlorinated Biphenyl
( ) -- Detection Limit.

**TABLE 1**
**Summary of Polychlorinated Biphenyl and Extractable Petroleum Hydrocarbon Soil Sampling Results**
**80 Wright Street, New Bedford, MA**

| Location | | D04 | D04 | D04 | D05 | D05 | D06 | D07 | D08 |
|---|---|---|---|---|---|---|---|---|---|
| Ramboll Sample ID | | SO-D04-2-4 | SO-D04-4-6 | SO-D04-6-8 | SO-D05-0-1 | DUP-1 | SO-D06-0-1 | SO-D07-0-1 | SO-D08-0-1 |
| Collection Depth (ft bgs) | MCP | 2 - 4 | 4 - 6 | 6 - 8 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 |
| Sample Method | RCS-2 | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push |
| Sample Date | | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 |
| Comments | | | | | | Field Duplicate | | | |
| **PCBs analyzed via EPA Method SW8082** | | | | | | | | | |
| PCBs (total) | 4 | ND (0.07) | 0.082 (0.076) | 0.1 (0.084) | ND (0.069) | ND (0.068) | ND (0.067) | ND (0.068) | ND (0.069) |
| Aroclor-1016 | NE | ND (0.07) | ND (0.076) | ND (0.084) | ND (0.069) | ND (0.068) | ND (0.067) | ND (0.068) | ND (0.069) |
| Aroclor-1221 | NE | ND (0.07) | ND (0.076) | ND (0.084) | ND (0.069) | ND (0.068) | ND (0.067) | ND (0.068) | ND (0.069) |
| Aroclor-1232 | NE | ND (0.07) | ND (0.076) | ND (0.084) | ND (0.069) | ND (0.068) | ND (0.067) | ND (0.068) | ND (0.069) |
| Aroclor-1242 | NE | ND (0.07) | ND (0.076) | ND (0.084) | ND (0.069) | ND (0.068) | ND (0.067) | ND (0.068) | ND (0.069) |
| Aroclor-1248 | NE | ND (0.07) | ND (0.076) | ND (0.084) | ND (0.069) | ND (0.068) | ND (0.067) | ND (0.068) | ND (0.069) |
| Aroclor-1254 | NE | ND (0.07) | 0.082 (0.076) | 0.1 (0.084) | ND (0.069) | ND (0.068) | ND (0.067) | ND (0.068) | ND (0.069) |
| Aroclor-1260 | NE | ND (0.07) | ND (0.076) | ND (0.084) | ND (0.069) | ND (0.068) | ND (0.067) | ND (0.068) | ND (0.069) |
| Aroclor-1262 | NE | ND (0.07) | ND (0.076) | ND (0.084) | ND (0.069) | ND (0.068) | ND (0.067) | ND (0.068) | ND (0.069) |
| Aroclor-1268 | NE | ND (0.07) | ND (0.076) | ND (0.084) | ND (0.069) | ND (0.068) | ND (0.067) | ND (0.068) | ND (0.069) |
| **PAHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| Acenaphthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | 10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | 7 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenz(a,h)anthracene | 4 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 80 | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 20 | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| **EPHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| C19-C36 Aliphatics | 5,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C9-C18 Aliphatic Hydrocarbons | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Adjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Unadjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Petroleum Hydrocarbons (Extractable) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |

**Notes:**
1 All concentrations are presented in mg/kg.
2 No concentrations exceed the MCP RCS-2 criteria, dated April 25, 2014.

**Abbreviations:**
EPH -- Extractable Petroleum Hydrocarbon
ND -- Not Detected.
NE -- Not Established.
NA -- Not Analyzed.
PAH -- Polycyclic Aromatic Hydrocarbon
PCB -- Polychlorinated Biphenyl
( ) -- Detection Limit.

**TABLE 1**
**Summary of Polychlorinated Biphenyl and Extractable Petroleum Hydrocarbon Soil Sampling Results**
**80 Wright Street, New Bedford, MA**

| Location | | D09 | D10 | E01 | E02 | E02 | E03 | E04 | E05 |
|---|---|---|---|---|---|---|---|---|---|
| Ramboll Sample ID | | SO-D09-0-1 | SO-D10-0-1 | SO-E01-0-1 | SO-E02-0-1 | DUP-3 | SO-E03-0-1 | SO-E04-0-1 | SO-E05-0-1 |
| Collection Depth (ft bgs) | MCP | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 |
| Sample Method | RCS-2 | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push |
| Sample Date | | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 |
| Comments | | | | | | Field Duplicate | | | |
| **PCBs analyzed via EPA Method SW8082** | | | | | | | | | |
| PCBs (total) | 4 | ND (0.068) | ND (0.081) | ND (0.07) | ND (0.071) | ND (0.072) | ND (0.069) | ND (0.068) | 0.076 (0.07) |
| Aroclor-1016 | NE | ND (0.068) | ND (0.081) | ND (0.07) | ND (0.071) | ND (0.072) | ND (0.069) | ND (0.068) | ND (0.07) |
| Aroclor-1221 | NE | ND (0.068) | ND (0.081) | ND (0.07) | ND (0.071) | ND (0.072) | ND (0.069) | ND (0.068) | ND (0.07) |
| Aroclor-1232 | NE | ND (0.068) | ND (0.081) | ND (0.07) | ND (0.071) | ND (0.072) | ND (0.069) | ND (0.068) | ND (0.07) |
| Aroclor-1242 | NE | ND (0.068) | ND (0.081) | ND (0.07) | ND (0.071) | ND (0.072) | ND (0.069) | ND (0.068) | ND (0.07) |
| Aroclor-1248 | NE | ND (0.068) | ND (0.081) | ND (0.07) | ND (0.071) | ND (0.072) | ND (0.069) | ND (0.068) | ND (0.07) |
| Aroclor-1254 | NE | ND (0.068) | ND (0.081) | ND (0.07) | ND (0.071) | ND (0.072) | ND (0.069) | ND (0.068) | 0.076 (0.07) |
| Aroclor-1260 | NE | ND (0.068) | ND (0.081) | ND (0.07) | ND (0.071) | ND (0.072) | ND (0.069) | ND (0.068) | ND (0.07) |
| Aroclor-1262 | NE | ND (0.068) | ND (0.081) | ND (0.07) | ND (0.071) | ND (0.072) | ND (0.069) | ND (0.068) | ND (0.07) |
| Aroclor-1268 | NE | ND (0.068) | ND (0.081) | ND (0.07) | ND (0.071) | ND (0.072) | ND (0.069) | ND (0.068) | ND (0.07) |
| **PAHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| Acenaphthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | 10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | 7 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenz(a,h)anthracene | 4 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 80 | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 20 | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| **EPHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| C19-C36 Aliphatics | 5,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C9-C18 Aliphatic Hydrocarbons | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Adjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Unadjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Petroleum Hydrocarbons (Extractable) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |

**Notes:**
1 All concentrations are presented in mg/kg.
2 No concentrations exceed the MCP RCS-2 criteria, dated April 25, 2014.

**Abbreviations:**
EPH -- Extractable Petroleum Hydrocarbon
ND -- Not Detected.
NE -- Not Established.
NA -- Not Analyzed.
PAH -- Polycyclic Aromatic Hydrocarbon
PCB -- Polychlorinated Biphenyl
( ) -- Detection Limit.

**TABLE 1**
**Summary of Polychlorinated Biphenyl and Extractable Petroleum Hydrocarbon Soil Sampling Results**
**80 Wright Street, New Bedford, MA**

| Location | | E06 | E07 | E08 | E09 | E09 | E10 | F01 | F02 |
|---|---|---|---|---|---|---|---|---|---|
| Ramboll Sample ID | | SO-E06-0-1 | SO-E07-0-1 | SO-E08-0-1 | SO-E09-0-1 | DUP-4 | SO-E10-0-1 | SO-F01-0-1 | SO-F02-0-1 |
| Collection Depth (ft bgs) | MCP | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 |
| Sample Method | RCS-2 | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push |
| Sample Date | | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 |
| Comments | | | | | | Field Duplicate | | | |
| **PCBs analyzed via EPA Method SW8082** | | | | | | | | | |
| PCBs (total) | 4 | ND (0.068) | ND (0.069) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.069) | ND (0.074) | ND (0.074) |
| Aroclor-1016 | NE | ND (0.068) | ND (0.069) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.069) | ND (0.074) | ND (0.074) |
| Aroclor-1221 | NE | ND (0.068) | ND (0.069) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.069) | ND (0.074) | ND (0.074) |
| Aroclor-1232 | NE | ND (0.068) | ND (0.069) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.069) | ND (0.074) | ND (0.074) |
| Aroclor-1242 | NE | ND (0.068) | ND (0.069) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.069) | ND (0.074) | ND (0.074) |
| Aroclor-1248 | NE | ND (0.068) | ND (0.069) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.069) | ND (0.074) | ND (0.074) |
| Aroclor-1254 | NE | ND (0.068) | ND (0.069) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.069) | ND (0.074) | ND (0.074) |
| Aroclor-1260 | NE | ND (0.068) | ND (0.069) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.069) | ND (0.074) | ND (0.074) |
| Aroclor-1262 | NE | ND (0.068) | ND (0.069) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.069) | ND (0.074) | ND (0.074) |
| Aroclor-1268 | NE | ND (0.068) | ND (0.069) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.069) | ND (0.074) | ND (0.074) |
| **PAHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| Acenaphthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | 10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | 7 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenz(a,h)anthracene | 4 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 80 | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 20 | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| **EPHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| C19-C36 Aliphatics | 5,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C9-C18 Aliphatic Hydrocarbons | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Adjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Unadjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Petroleum Hydrocarbons (Extractable) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |

**Notes:**
1 All concentrations are presented in mg/kg.
2 No concentrations exceed the MCP RCS-2 criteria, dated April 25, 2014.

**Abbreviations:**
EPH -- Extractable Petroleum Hydrocarbon
ND -- Not Detected.
NE -- Not Established.
NA -- Not Analyzed.
PAH -- Polycyclic Aromatic Hydrocarbon
PCB -- Polychlorinated Biphenyl
( ) -- Detection Limit.

**TABLE 1**
**Summary of Polychlorinated Biphenyl and Extractable Petroleum Hydrocarbon Soil Sampling Results**
**80 Wright Street, New Bedford, MA**

| Location | | F03 | F04 | F04 | F04 | F04 | F04 | F05 | F06 |
|---|---|---|---|---|---|---|---|---|---|
| Ramboll Sample ID | | SO-F03-0-1 | SO-F04-0-1 | SO-F04-0-2 | SO-F04-2-4 | SO-F04-4-6 | SO-F04-6-8 | SO-F05-0-1 | SO-F06-0-1 |
| Collection Depth (ft bgs) | MCP | 0 - 1 | 0 - 1 | 0 - 2 | 2 - 4 | 4 - 6 | 6 - 8 | 0 - 1 | 0 - 1 |
| Sample Method | RCS-2 | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push |
| Sample Date | | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 |
| Comments | | | | | | | | | |
| **PCBs analyzed via EPA Method SW8082** | | | | | | | | | |
| PCBs (total) | 4 | ND (0.071) | 0.14 (0.073) | 0.3 (0.075) | ND (0.074) | ND (0.076) | ND (0.077) | ND (0.068) | 0.3 (0.07) |
| Aroclor-1016 | NE | ND (0.071) | ND (0.073) | ND (0.075) | ND (0.074) | ND (0.076) | ND (0.077) | ND (0.068) | ND (0.07) |
| Aroclor-1221 | NE | ND (0.071) | ND (0.073) | ND (0.075) | ND (0.074) | ND (0.076) | ND (0.077) | ND (0.068) | ND (0.07) |
| Aroclor-1232 | NE | ND (0.071) | ND (0.073) | ND (0.075) | ND (0.074) | ND (0.076) | ND (0.077) | ND (0.068) | ND (0.07) |
| Aroclor-1242 | NE | ND (0.071) | ND (0.073) | ND (0.075) | ND (0.074) | ND (0.076) | ND (0.077) | ND (0.068) | ND (0.07) |
| Aroclor-1248 | NE | ND (0.071) | ND (0.073) | ND (0.075) | ND (0.074) | ND (0.076) | ND (0.077) | ND (0.068) | ND (0.07) |
| Aroclor-1254 | NE | ND (0.071) | 0.14 (0.073) | 0.3 (0.075) | ND (0.074) | ND (0.076) | ND (0.077) | ND (0.068) | 0.3 (0.07) |
| Aroclor-1260 | NE | ND (0.071) | ND (0.073) | ND (0.075) | ND (0.074) | ND (0.076) | ND (0.077) | ND (0.068) | ND (0.07) |
| Aroclor-1262 | NE | ND (0.071) | ND (0.073) | ND (0.075) | ND (0.074) | ND (0.076) | ND (0.077) | ND (0.068) | ND (0.07) |
| Aroclor-1268 | NE | ND (0.071) | ND (0.073) | ND (0.075) | ND (0.074) | ND (0.076) | ND (0.077) | ND (0.068) | ND (0.07) |
| **PAHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| Acenaphthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | 10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | 7 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenz(a,h)anthracene | 4 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 80 | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 20 | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| **EPHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| C19-C36 Aliphatics | 5,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C9-C18 Aliphatic Hydrocarbons | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Adjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Unadjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Petroleum Hydrocarbons (Extractable) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |

**Notes:**
1 All concentrations are presented in mg/kg.
2 No concentrations exceed the MCP RCS-2 criteria, dated April 25, 2014.

**Abbreviations:**
EPH -- Extractable Petroleum Hydrocarbon
ND -- Not Detected.
NE -- Not Established.
NA -- Not Analyzed.
PAH -- Polycyclic Aromatic Hydrocarbon
PCB -- Polychlorinated Biphenyl
( ) -- Detection Limit.

**TABLE 1**
**Summary of Polychlorinated Biphenyl and Extractable Petroleum Hydrocarbon Soil Sampling Results**
**80 Wright Street, New Bedford, MA**

| Location | | F07 | F07 | F07 | F07 | F07 | F08 | F09 | F10 |
|---|---|---|---|---|---|---|---|---|---|
| Ramboll Sample ID | | SO-F07-0-1 | SO-F07-0-2 | SO-F07-2-4 | SO-F07-4-6 | SO-F07-6-8 | SO-F08-0-1 | SO-F09-0-1 | SO-F10-0-1 |
| Collection Depth (ft bgs) | MCP | 0 - 1 | 0 - 2 | 2 - 4 | 4 - 6 | 6 - 8 | 0 - 1 | 0 - 1 | 0 - 1 |
| Sample Method | RCS-2 | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push |
| Sample Date | | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 |
| Comments | | | | | | | | | |
| **PCBs analyzed via EPA Method SW8082** | | | | | | | | | |
| PCBs (total) | 4 | ND (0.069) | ND (0.071) | ND (0.07) | 0.08 (0.073) | 0.24 (0.073) | ND (0.071) | ND (0.069) | ND (0.067) |
| Aroclor-1016 | NE | ND (0.069) | ND (0.071) | ND (0.07) | ND (0.073) | ND (0.073) | ND (0.071) | ND (0.069) | ND (0.067) |
| Aroclor-1221 | NE | ND (0.069) | ND (0.071) | ND (0.07) | ND (0.073) | ND (0.073) | ND (0.071) | ND (0.069) | ND (0.067) |
| Aroclor-1232 | NE | ND (0.069) | ND (0.071) | ND (0.07) | ND (0.073) | ND (0.073) | ND (0.071) | ND (0.069) | ND (0.067) |
| Aroclor-1242 | NE | ND (0.069) | ND (0.071) | ND (0.07) | ND (0.073) | ND (0.073) | ND (0.071) | ND (0.069) | ND (0.067) |
| Aroclor-1248 | NE | ND (0.069) | ND (0.071) | ND (0.07) | ND (0.073) | ND (0.073) | ND (0.071) | ND (0.069) | ND (0.067) |
| Aroclor-1254 | NE | ND (0.069) | ND (0.071) | ND (0.07) | 0.08 (0.073) | 0.24 (0.073) | ND (0.071) | ND (0.069) | ND (0.067) |
| Aroclor-1260 | NE | ND (0.069) | ND (0.071) | ND (0.07) | ND (0.073) | ND (0.073) | ND (0.071) | ND (0.069) | ND (0.067) |
| Aroclor-1262 | NE | ND (0.069) | ND (0.071) | ND (0.07) | ND (0.073) | ND (0.073) | ND (0.071) | ND (0.069) | ND (0.067) |
| Aroclor-1268 | NE | ND (0.069) | ND (0.071) | ND (0.07) | ND (0.073) | ND (0.073) | ND (0.071) | ND (0.069) | ND (0.067) |
| **PAHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| Acenaphthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | 10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | 7 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenz(a,h)anthracene | 4 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 80 | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 20 | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| **EPHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| C19-C36 Aliphatics | 5,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C9-C18 Aliphatic Hydrocarbons | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Adjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Unadjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Petroleum Hydrocarbons (Extractable) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |

**Notes:**
1 All concentrations are presented in mg/kg.
2 No concentrations exceed the MCP RCS-2 criteria, dated April 25, 2014.

**Abbreviations:**
EPH -- Extractable Petroleum Hydrocarbon
ND -- Not Detected.
NE -- Not Established.
NA -- Not Analyzed.
PAH -- Polycyclic Aromatic Hydrocarbon
PCB -- Polychlorinated Biphenyl
( ) -- Detection Limit.

**TABLE 1**
**Summary of Polychlorinated Biphenyl and Extractable Petroleum Hydrocarbon Soil Sampling Results**
**80 Wright Street, New Bedford, MA**

| Location | | G01 | G02 | G02 | G02 | G02 | G02 | G03 | G04 |
|---|---|---|---|---|---|---|---|---|---|
| Ramboll Sample ID | | SO-G01-0-1 | SO-G02-0-1 | SO-G02-0-2 | SO-G02-2-4 | SO-G02-4-6 | SO-G02-6-8 | SO-G03-0-1 | SO-G04-0-1 |
| Collection Depth (ft bgs) | MCP | 0 - 1 | 0 - 1 | 0 - 2 | 2 - 4 | 4 - 6 | 6 - 8 | 0 - 1 | 0 - 1 |
| Sample Method | RCS-2 | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push |
| Sample Date | | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 |
| Comments | | | | | | | | | |
| **PCBs analyzed via EPA Method SW8082** | | | | | | | | | |
| PCBs (total) | 4 | ND (0.073) | ND (0.071) | ND (0.071) | ND (0.076) | 0.1 (0.098) | 1.7 (0.48) | ND (0.068) | 0.44 (0.073) |
| Aroclor-1016 | NE | ND (0.073) | ND (0.071) | ND (0.071) | ND (0.076) | ND (0.098) | ND (0.48) | ND (0.068) | ND (0.073) |
| Aroclor-1221 | NE | ND (0.073) | ND (0.071) | ND (0.071) | ND (0.076) | ND (0.098) | ND (0.48) | ND (0.068) | ND (0.073) |
| Aroclor-1232 | NE | ND (0.073) | ND (0.071) | ND (0.071) | ND (0.076) | ND (0.098) | ND (0.48) | ND (0.068) | ND (0.073) |
| Aroclor-1242 | NE | ND (0.073) | ND (0.071) | ND (0.071) | ND (0.076) | ND (0.098) | ND (0.48) | ND (0.068) | ND (0.073) |
| Aroclor-1248 | NE | ND (0.073) | ND (0.071) | ND (0.071) | ND (0.076) | ND (0.098) | ND (0.48) | ND (0.068) | ND (0.073) |
| Aroclor-1254 | NE | ND (0.073) | ND (0.071) | ND (0.071) | ND (0.076) | 0.1 (0.098) | 1.7 (0.48) | ND (0.068) | 0.44 (0.073) |
| Aroclor-1260 | NE | ND (0.073) | ND (0.071) | ND (0.071) | ND (0.076) | ND (0.098) | ND (0.48) | ND (0.068) | ND (0.073) |
| Aroclor-1262 | NE | ND (0.073) | ND (0.071) | ND (0.071) | ND (0.076) | ND (0.098) | ND (0.48) | ND (0.068) | ND (0.073) |
| Aroclor-1268 | NE | ND (0.073) | ND (0.071) | ND (0.071) | ND (0.076) | ND (0.098) | ND (0.48) | ND (0.068) | ND (0.073) |
| **PAHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| Acenaphthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | 10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | 7 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenz(a,h)anthracene | 4 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 80 | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 20 | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| **EPHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| C19-C36 Aliphatics | 5,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C9-C18 Aliphatic Hydrocarbons | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Adjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Unadjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Petroleum Hydrocarbons (Extractable) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |

**Notes:**
1 All concentrations are presented in mg/kg.
2 No concentrations exceed the MCP RCS-2 criteria, dated April 25, 2014.

**Abbreviations:**
EPH -- Extractable Petroleum Hydrocarbon
ND -- Not Detected.
NE -- Not Established.
NA -- Not Analyzed.
PAH -- Polycyclic Aromatic Hydrocarbon
PCB -- Polychlorinated Biphenyl
( ) -- Detection Limit.

**TABLE 1**
**Summary of Polychlorinated Biphenyl and Extractable Petroleum Hydrocarbon Soil Sampling Results**
**80 Wright Street, New Bedford, MA**

| Location | | G05 | G06 | G07 | G08 | G09 | G09 | G09 | G09 |
|---|---|---|---|---|---|---|---|---|---|
| Ramboll Sample ID | | SO-G05-0-1 | SO-G06-0-1 | SO-G07-0-1 | SO-G08-0-1 | SO-G09-0-1 | SO-G09-0-2 | SO-G09-2-4 | SO-G09-4-6 |
| Collection Depth (ft bgs) | MCP | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 2 | 2 - 4 | 4 - 6 |
| Sample Method | RCS-2 | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push |
| Sample Date | | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 |
| Comments | | | | | | | | | |
| **PCBs analyzed via EPA Method SW8082** | | | | | | | | | |
| PCBs (total) | 4 | ND (0.068) | ND (0.071) | ND (0.07) | ND (0.07) | ND (0.069) | ND (0.07) | ND (0.071) | ND (0.075) |
| Aroclor-1016 | NE | ND (0.068) | ND (0.071) | ND (0.07) | ND (0.07) | ND (0.069) | ND (0.07) | ND (0.071) | ND (0.075) |
| Aroclor-1221 | NE | ND (0.068) | ND (0.071) | ND (0.07) | ND (0.07) | ND (0.069) | ND (0.07) | ND (0.071) | ND (0.075) |
| Aroclor-1232 | NE | ND (0.068) | ND (0.071) | ND (0.07) | ND (0.07) | ND (0.069) | ND (0.07) | ND (0.071) | ND (0.075) |
| Aroclor-1242 | NE | ND (0.068) | ND (0.071) | ND (0.07) | ND (0.07) | ND (0.069) | ND (0.07) | ND (0.071) | ND (0.075) |
| Aroclor-1248 | NE | ND (0.068) | ND (0.071) | ND (0.07) | ND (0.07) | ND (0.069) | ND (0.07) | ND (0.071) | ND (0.075) |
| Aroclor-1254 | NE | ND (0.068) | ND (0.071) | ND (0.07) | ND (0.07) | ND (0.069) | ND (0.07) | ND (0.071) | ND (0.075) |
| Aroclor-1260 | NE | ND (0.068) | ND (0.071) | ND (0.07) | ND (0.07) | ND (0.069) | ND (0.07) | ND (0.071) | ND (0.075) |
| Aroclor-1262 | NE | ND (0.068) | ND (0.071) | ND (0.07) | ND (0.07) | ND (0.069) | ND (0.07) | ND (0.071) | ND (0.075) |
| Aroclor-1268 | NE | ND (0.068) | ND (0.071) | ND (0.07) | ND (0.07) | ND (0.069) | ND (0.07) | ND (0.071) | ND (0.075) |
| **PAHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| Acenaphthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | 10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | 7 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenz(a,h)anthracene | 4 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 80 | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 20 | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| **EPHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| C19-C36 Aliphatics | 5,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C9-C18 Aliphatic Hydrocarbons | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Adjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Unadjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Petroleum Hydrocarbons (Extractable) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |

**Notes:**
1 All concentrations are presented in mg/kg.
2 No concentrations exceed the MCP RCS-2 criteria, dated April 25, 2014.

**Abbreviations:**
EPH -- Extractable Petroleum Hydrocarbon
ND -- Not Detected.
NE -- Not Established.
NA -- Not Analyzed.
PAH -- Polycyclic Aromatic Hydrocarbon
PCB -- Polychlorinated Biphenyl
( ) -- Detection Limit.

**TABLE 1**
**Summary of Polychlorinated Biphenyl and Extractable Petroleum Hydrocarbon Soil Sampling Results**
**80 Wright Street, New Bedford, MA**

| Location | | G09 | G10 | H01 | H02 | H03 | H04 | H05 | H06 |
|---|---|---|---|---|---|---|---|---|---|
| Ramboll Sample ID | | SO-G09-6-8 | SO-G10-0-1 | SO-H01-0-1 | SO-H02-0-1 | SO-H03-0-1 | SO-H04-0-1 | SO-H05-0-1 | SO-H06-0-1 |
| Collection Depth (ft bgs) | MCP | 6 - 8 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 |
| Sample Method | RCS-2 | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push |
| Sample Date | | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 |
| Comments | | | | | | | | | |
| **PCBs analyzed via EPA Method SW8082** | | | | | | | | | |
| PCBs (total) | 4 | ND (0.076) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.075) | 0.16 (0.071) | ND (0.069) | ND (0.069) |
| Aroclor-1016 | NE | ND (0.076) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.075) | ND (0.071) | ND (0.069) | ND (0.069) |
| Aroclor-1221 | NE | ND (0.076) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.075) | ND (0.071) | ND (0.069) | ND (0.069) |
| Aroclor-1232 | NE | ND (0.076) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.075) | ND (0.071) | ND (0.069) | ND (0.069) |
| Aroclor-1242 | NE | ND (0.076) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.075) | ND (0.071) | ND (0.069) | ND (0.069) |
| Aroclor-1248 | NE | ND (0.076) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.075) | ND (0.071) | ND (0.069) | ND (0.069) |
| Aroclor-1254 | NE | ND (0.076) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.075) | 0.16 (0.071) | ND (0.069) | ND (0.069) |
| Aroclor-1260 | NE | ND (0.076) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.075) | ND (0.071) | ND (0.069) | ND (0.069) |
| Aroclor-1262 | NE | ND (0.076) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.075) | ND (0.071) | ND (0.069) | ND (0.069) |
| Aroclor-1268 | NE | ND (0.076) | ND (0.07) | ND (0.07) | ND (0.071) | ND (0.075) | ND (0.071) | ND (0.069) | ND (0.069) |
| **PAHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| Acenaphthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthylene | 10 | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | 7 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | 400 | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenz(a,h)anthracene | 4 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | 40 | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | 80 | NA | NA | NA | NA | NA | NA | NA | NA |
| Naphthalene | 20 | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | 1,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| **EPHs analyzed via EPA Method EPH-19-2.1** | | | | | | | | | |
| C19-C36 Aliphatics | 5,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C9-C18 Aliphatic Hydrocarbons | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Adjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| C11-C22 Aromatics (Unadjusted) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |
| Petroleum Hydrocarbons (Extractable) | 3,000 | NA | NA | NA | NA | NA | NA | NA | NA |

**Notes:**
1 All concentrations are presented in mg/kg.
2 No concentrations exceed the MCP RCS-2 criteria, dated April 25, 2014.

**Abbreviations:**
EPH -- Extractable Petroleum Hydrocarbon
ND -- Not Detected.
NE -- Not Established.
NA -- Not Analyzed.
PAH -- Polycyclic Aromatic Hydrocarbon
PCB -- Polychlorinated Biphenyl
( ) -- Detection Limit.

**TABLE 1**
**Summary of Polychlorinated Biphenyl and Extractable Petroleum Hydrocarbon Soil Sampling Results**
**80 Wright Street, New Bedford, MA**

| Location | | H07 | H08 | H09 | H10 | A02 |
|---|---|---|---|---|---|---|
| Ramboll Sample ID | | SO-H07-0-1 | SO-H08-0-1 | SO-H09-0-1 | SO-H10-0-1 | PS-A02-8-9 |
| Collection Depth (ft bgs) | MCP | 0 - 1 | 0 - 1 | 0 - 1 | 0 - 1 | 8 - 9 |
| Sample Method | RCS-2 | Direct Push | Direct Push | Direct Push | Direct Push | Direct Push |
| Sample Date | | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 | 10/25/2021 |
| Comments | | | | | | |
| **PCBs analyzed via EPA Method SW8082** | | | | | | |
| PCBs (total) | 4 | ND (0.07) | ND (0.074) | ND (0.07) | 0.45 (0.07) | NA |
| Aroclor-1016 | NE | ND (0.07) | ND (0.074) | ND (0.07) | ND (0.07) | NA |
| Aroclor-1221 | NE | ND (0.07) | ND (0.074) | ND (0.07) | ND (0.07) | NA |
| Aroclor-1232 | NE | ND (0.07) | ND (0.074) | ND (0.07) | ND (0.07) | NA |
| Aroclor-1242 | NE | ND (0.07) | ND (0.074) | ND (0.07) | ND (0.07) | NA |
| Aroclor-1248 | NE | ND (0.07) | ND (0.074) | ND (0.07) | ND (0.07) | NA |
| Aroclor-1254 | NE | ND (0.07) | ND (0.074) | ND (0.07) | 0.45 (0.07) | NA |
| Aroclor-1260 | NE | ND (0.07) | ND (0.074) | ND (0.07) | ND (0.07) | NA |
| Aroclor-1262 | NE | ND (0.07) | ND (0.074) | ND (0.07) | ND (0.07) | NA |
| Aroclor-1268 | NE | ND (0.07) | ND (0.074) | ND (0.07) | ND (0.07) | NA |
| **PAHs analyzed via EPA Method EPH-19-2.1** | | | | | | |
| Acenaphthene | 3,000 | NA | NA | NA | NA | ND (0.23) |
| Acenaphthylene | 10 | NA | NA | NA | NA | ND (0.23) |
| Anthracene | 3,000 | NA | NA | NA | NA | ND (0.23) |
| Benzo(a)anthracene | 40 | NA | NA | NA | NA | ND (0.23) |
| Benzo(a)pyrene | 7 | NA | NA | NA | NA | ND (0.23) |
| Benzo(b)fluoranthene | 40 | NA | NA | NA | NA | ND (0.23) |
| Benzo(g,h,i)perylene | 3,000 | NA | NA | NA | NA | ND (0.23) |
| Benzo(k)fluoranthene | 400 | NA | NA | NA | NA | ND (0.23) |
| Chrysene | 400 | NA | NA | NA | NA | ND (0.23) |
| Dibenz(a,h)anthracene | 4 | NA | NA | NA | NA | ND (0.23) |
| Fluoranthene | 3,000 | NA | NA | NA | NA | ND (0.23) |
| Fluorene | 3,000 | NA | NA | NA | NA | ND (0.23) |
| Indeno(1,2,3-cd)pyrene | 40 | NA | NA | NA | NA | ND (0.23) |
| 2-Methylnaphthalene | 80 | NA | NA | NA | NA | ND (0.23) |
| Naphthalene | 20 | NA | NA | NA | NA | ND (0.23) |
| Phenanthrene | 1,000 | NA | NA | NA | NA | ND (0.23) |
| Pyrene | 3,000 | NA | NA | NA | NA | ND (0.23) |
| **EPHs analyzed via EPA Method EPH-19-2.1** | | | | | | |
| C19-C36 Aliphatics | 5,000 | NA | NA | NA | NA | ND (66) |
| C9-C18 Aliphatic Hydrocarbons | 3,000 | NA | NA | NA | NA | ND (66) |
| C11-C22 Aromatics (Adjusted) | 3,000 | NA | NA | NA | NA | ND (66) |
| C11-C22 Aromatics (Unadjusted) | 3,000 | NA | NA | NA | NA | ND (66) |
| Petroleum Hydrocarbons (Extractable) | 3,000 | NA | NA | NA | NA | ND (66) |

**Notes:**

1 All concentrations are presented in mg/kg.

2 No concentrations exceed the MCP RCS-2 criteria, dated April 25, 2014.

**Abbreviations:**

EPH -- Extractable Petroleum Hydrocarbon
ND -- Not Detected.
NE -- Not Established.
NA -- Not Analyzed.
PAH -- Polycyclic Aromatic Hydrocarbon
PCB -- Polychlorinated Biphenyl
( ) -- Detection Limit.

**TABLE 2**
**Summary of Landfill Disposal Characterization Soil Sampling Results**
**80 Wright Street, New Bedford, MA**

| Location | | Q01 | Q02 | Q03 | Q04 |
|---|---|---|---|---|---|
| Ramboll Sample ID | | SO-Q1-0-2 | SO-Q2-0-2 | SO-Q3-0-2 | SO-Q4-0-2 |
| Collection Depth (ft bgs) | MCP | 0 - 2 | 0 - 2 | 0 - 2 | 0 - 2 |
| Sample Method | RCS-2 | Direct Push | Direct Push | Direct Push | Direct Push |
| Sample Date | | 10/26/2021 | 10/26/2021 | 10/26/2021 | 10/26/2021 |
| Comments | | | | | |
| **Waste Characterization analyzed via various methods** | | | | | |
| Corrosivity | NE | Negative | Negative | Negative | Negative |
| Flashpoint (°F) | NE | ND (200) | ND (200) | ND (200) | ND (200) |
| Cyanide (Reactive) | NE | ND (5) | ND (5) | ND (5) | ND (5) |
| Sulfide (Reactive) | NE | ND (20) | ND (20) | ND (20) | ND (20) |
| Reactivity | NE | Negative | Negative | Negative | Negative |
| Ignitability (°F) | NE | ND (140) | ND (140) | ND (140) | ND (140) |
| Solids (total) (%) | NE | 94 | 90 | 94 | 95 |
| pH (Standard Units) | NE | 6.94 (1) | 7.88 (1) | 6.82 (1) | 7.01 (1) |
| **Volatile Organic Compound analyzed via EPA Method SW8260** | | | | | |
| Acetone | 50 | ND (0.24) | ND (0.29) | ND (0.28) | ND (0.26) |
| Acrylonitrile | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Benzene | 200 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1-Methyl-2-isopropylbenzene | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Bromobenzene | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Bromochloromethane | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Bromodichloromethane | 0.1 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Bromoform | 1 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Bromomethane | 0.5 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 2-Butanone | 50 | ND (0.029) | ND (0.035) | ND (0.033) | ND (0.032) |
| n-Butylbenzene | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| sec-Butylbenzene | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| tert-Butylbenzene | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Carbon Disulfide | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Carbon Tetrachloride | 5 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Chlorobenzene | 3 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Chloroethane | 1000 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Chloroform | 0.2 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Chloromethane | 1000 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 2-Chlorotoluene | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 4-Chlorotoluene | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Cumene | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| p-Cymene | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,2-Dibromo-3-chloropropane | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Dibromochloromethane | 0.03 | ND (0.0029) | ND (0.0035) | ND (0.0033) | ND (0.0032) |
| 1,2-Dibromoethane | 0.1 | ND (0.00049) | ND (0.00058) | ND (0.00055) | ND (0.00053) |
| Dibromomethane | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| trans-1,4-Dichloro-2-butene | NE | ND (0.0098) | ND (0.012) | ND (0.011) | ND (0.011) |
| 1,2-Dichlorobenzene | 100 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,3-Dichlorobenzene | 200 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,4-Dichlorobenzene | 1 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Dichlorodifluoromethane | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,1-Dichloroethane | 9 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,2-Dichloroethane | 0.1 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,1-Dichloroethene | 40 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| cis-1,2-Dichloroethene | 0.1 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| trans-1,2-Dichloroethene | 1 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,2-Dichloropropane | 0.1 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,3-Dichloropropane | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 2,2-Dichloropropane | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,1-Dichloropropene | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,3-Dichloropropene (total) | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| cis-1,3-Dichloropropene | 0.4 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| trans-1,3-Dichloropropene | 0.4 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,4-Dioxane | 6 | ND (0.098) | ND (0.12) | ND (0.11) | ND (0.11) |
| Ethyl tert-butyl ether | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| t-Amyl methyl ether | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Ethyl Benzene | 1000 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Diethyl ether | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 2-Hexanone | NE | ND (0.024) | ND (0.029) | ND (0.028) | ND (0.026) |

**TABLE 2**
**Summary of Landfill Disposal Characterization Soil Sampling Results**
**80 Wright Street, New Bedford, MA**

| Location | | Q01 | Q02 | Q03 | Q04 |
|---|---|---|---|---|---|
| Ramboll Sample ID | | SO-Q1-0-2 | SO-Q2-0-2 | SO-Q3-0-2 | SO-Q4-0-2 |
| Collection Depth (ft bgs) | MCP | 0 - 2 | 0 - 2 | 0 - 2 | 0 - 2 |
| Sample Method | RCS-2 | Direct Push | Direct Push | Direct Push | Direct Push |
| Sample Date | | 10/26/2021 | 10/26/2021 | 10/26/2021 | 10/26/2021 |
| Comments | | | | | |
| Hexachlorobutadiene | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Methyl tert-butyl ether | 100 | ND (0.0098) | ND (0.012) | ND (0.011) | ND (0.011) |
| 4-Methyl-2-pentanone | 50 | ND (0.024) | ND (0.029) | ND (0.028) | ND (0.026) |
| Methylene Chloride | 20 | ND (0.0098) | ND (0.012) | ND (0.011) | ND (0.011) |
| Diisopropyl ether | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Naphthalene | 20 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| n-Propylbenzene | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Styrene | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,1,1,2-Tetrachloroethane | 0.1 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,1,2,2-Tetrachloroethane | NE | ND (0.0029) | ND (0.0035) | ND (0.0033) | ND (0.0032) |
| Tetrachloroethene | 10 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Tetrahydrofuran | NE | ND (0.0098) | ND (0.012) | ND (0.011) | ND (0.011) |
| Toluene | 1000 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,2,3-Trichlorobenzene | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,2,4-Trichlorobenzene | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,1,1-Trichloroethane | 600 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,1,2-Trichloroethane | 2 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Trichloroethene | 0.3 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Trichlorofluoromethane | 10000 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,2,3-Trichloropropane | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | NE | ND (0.0098) | ND (0.012) | ND (0.011) | ND (0.011) |
| 1,2,4-Trimethylbenzene | 10000 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| 1,3,5-Trimethylbenzene | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Vinyl Chloride | 0.7 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| m,p-xylene | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| ortho-xylene | NE | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| Xylenes (total) | 100 | ND (0.0049) | ND (0.0058) | ND (0.0055) | ND (0.0053) |
| **Semivolatile Organic Hydrocarbons analyzed via EPA Method SW8270** | | | | | |
| Acenaphthene | 3000 | ND (0.24) | 0.62 (0.25) | ND (0.25) | ND (0.24) |
| Acenaphthylene | 10 | ND (0.24) | 3.6 (0.25) | ND (0.25) | ND (0.24) |
| Acetophenone | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| Aniline | NE | ND (0.35) | ND (0.36) | ND (0.35) | ND (0.35) |
| Anthracene | 3000 | ND (0.24) | 5.6 (0.25) | ND (0.25) | ND (0.24) |
| Benzidine | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| Benzo(a)anthracene | 40 | ND (0.24) | 11 (2.5) | ND (0.25) | ND (0.24) |
| Benzo(a)pyrene | 7 | ND (0.24) | **9.1 (2.5)** | ND (0.25) | ND (0.24) |
| Benzo(b)fluoranthene | 40 | ND (0.24) | 6.7 (0.25) | ND (0.25) | ND (0.24) |
| Benzo(g,h,i)perylene | 3000 | ND (0.24) | 4 (0.25) | ND (0.25) | ND (0.24) |
| Benzo(k)fluoranthene | 400 | ND (0.24) | 5.5 (0.25) | ND (0.25) | ND (0.24) |
| Benzoic Acid | NE | ND (0.7) | ND (0.72) | ND (0.7) | ND (0.69) |
| bis(2-Chloroethoxy)methane | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| bis(2-Chloroethyl) ether | NE | ND (0.35) | ND (0.36) | ND (0.35) | ND (0.35) |
| 4-Bromophenyl-phenyl ether | NE | ND (0.35) | ND (0.36) | ND (0.35) | ND (0.35) |
| Carbazole | NE | ND (0.35) | 0.95 (0.36) | ND (0.35) | ND (0.35) |
| 4-Chloro-3-methylphenol | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| 4-Chloroaniline | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| 2-Chloronaphthalene | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| 2-Chlorophenol | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| 4-Chlorophenyl-phenyl ether | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| Chrysene | 400 | ND (0.24) | 9.7 (2.5) | ND (0.25) | ND (0.24) |
| m/p-cresol | NE | ND (0.35) | ND (0.36) | ND (0.35) | ND (0.35) |
| Dibenz(a,h)anthracene | 4 | ND (0.24) | 1.3 (0.25) | ND (0.25) | ND (0.24) |
| Dibenzofuran | NE | ND (0.24) | 2.3 (0.25) | ND (0.25) | ND (0.24) |
| 1,2-Dichlorobenzene | 100 | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| 1,3-Dichlorobenzene | 200 | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| 1,4-Dichlorobenzene | 1 | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| 1,2,4-Trichlorobenzene | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| 3,3'-Dichlorobenzidine | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| 2,4-Dichlorophenol | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| 2,4-Dimethylphenol | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| 4,6-Dinitro-2-methylphenol | NE | ND (0.35) | ND (0.36) | ND (0.35) | ND (0.35) |
| 2,4-Dinitrophenol | NE | ND (0.35) | ND (0.36) | ND (0.35) | ND (0.35) |

**TABLE 2**
**Summary of Landfill Disposal Characterization Soil Sampling Results**
**80 Wright Street, New Bedford, MA**

| Location | | Q01 | Q02 | Q03 | Q04 |
|---|---|---|---|---|---|
| Ramboll Sample ID | | SO-Q1-0-2 | SO-Q2-0-2 | SO-Q3-0-2 | SO-Q4-0-2 |
| Collection Depth (ft bgs) | MCP | 0 - 2 | 0 - 2 | 0 - 2 | 0 - 2 |
| Sample Method | RCS-2 | Direct Push | Direct Push | Direct Push | Direct Push |
| Sample Date | | 10/26/2021 | 10/26/2021 | 10/26/2021 | 10/26/2021 |
| Comments | | | | | |
| 2,4-Dinitrotoluene | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| 2,6-Dinitrotoluene | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| 1,2-Diphenylhydrazine | NE | ND (0.35) | ND (0.36) | ND (0.35) | ND (0.35) |
| Fluoranthene | 3000 | ND (0.24) | 32 (2.5) | ND (0.25) | ND (0.24) |
| Fluorene | 3000 | ND (0.24) | 2.1 (0.25) | ND (0.25) | ND (0.24) |
| Hexachlorobenzene | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| Hexachlorobutadiene | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| Hexachlorocyclopentadiene | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| Hexachloroethane | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| Indeno(1,2,3-cd)pyrene | 40 | ND (0.24) | 5 (0.25) | ND (0.25) | ND (0.24) |
| Isophorone | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| 2-Methylnaphthalene | 80 | ND (0.24) | 2 (0.25) | ND (0.25) | ND (0.24) |
| 2-Methylphenol | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| Naphthalene | 20 | ND (0.24) | 2.2 (0.25) | ND (0.25) | ND (0.24) |
| 2-Nitroaniline | NE | ND (0.35) | ND (0.36) | ND (0.35) | ND (0.35) |
| 3-Nitroaniline | NE | ND (0.35) | ND (0.36) | ND (0.35) | ND (0.35) |
| 4-Nitroaniline | NE | ND (0.56) | ND (0.58) | ND (0.56) | ND (0.55) |
| Nitrobenzene | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| 2-Nitrophenol | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| 4-Nitrophenol | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| N-Nitrosodimethylamine | NE | ND (0.35) | ND (0.36) | ND (0.35) | ND (0.35) |
| N-Nitrosodiphenylamine | NE | ND (0.35) | ND (0.36) | ND (0.35) | ND (0.35) |
| N-Nitroso-di-n-propylamine | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| 2,2'-oxybis(1-Chloropropane) | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| Pentachloronitrobenzene | NE | ND (0.35) | ND (0.36) | ND (0.35) | ND (0.35) |
| Pentachlorophenol | NE | ND (0.35) | ND (0.36) | ND (0.35) | ND (0.35) |
| Phenanthrene | 1000 | ND (0.24) | 34 (2.5) | ND (0.25) | ND (0.24) |
| Phenol | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| bis(2-Ethylhexyl)phthalate | NE | ND (0.35) | ND (0.36) | ND (0.35) | ND (0.35) |
| Butylbenzylphthalate | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| Diethylphthalate | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| Dimethylphthalate | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| Di-n-butylphthalate | NE | ND (0.35) | ND (0.36) | ND (0.35) | ND (0.35) |
| Di-n-octylphthalate | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| Pyrene | 3000 | ND (0.24) | 26 (2.5) | ND (0.25) | ND (0.24) |
| Pyridine | NE | ND (0.35) | ND (0.36) | ND (0.35) | ND (0.35) |
| 1,2,4,5-Tetrachlorobenzene | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| 2,4,5-Trichlorophenol | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| 2,4,6-Trichlorophenol | NE | ND (0.24) | ND (0.25) | ND (0.25) | ND (0.24) |
| **Total Petroleum Hydrocarbons analyzed via EPA Method SW8015D** | | | | | |
| #2 Fuel Oil | NE | ND (52) | ND (55) | ND (52) | ND (51) |
| #4 Fuel Oil | NE | ND (52) | ND (55) | ND (52) | ND (51) |
| #6 Fuel Oil | NE | ND (52) | ND (55) | ND (52) | ND (51) |
| Kerosene | NE | ND (52) | ND (55) | ND (52) | ND (51) |
| Motor Oil | NE | ND (52) | ND (55) | ND (52) | ND (51) |
| Petroleum Hydrocarbon (Unidentified ) | NE | ND (52) | ND (55) | ND (52) | ND (51) |
| Petroleum Hydrocarbons (Extractable) | 3000 | ND (52) | ND (55) | ND (52) | ND (51) |
| **Polychlorinated Biphenyls analyzed via EPA Method SW8082** | | | | | |
| PCBs (total) | 4 | ND (0.069) | ND (0.073) | ND (0.069) | ND (0.07) |
| Aroclor-1221 | NE | ND (0.069) | ND (0.073) | ND (0.069) | ND (0.07) |
| Aroclor-1232 | NE | ND (0.069) | ND (0.073) | ND (0.069) | ND (0.07) |
| Aroclor-1242 | NE | ND (0.069) | ND (0.073) | ND (0.069) | ND (0.07) |
| Aroclor-1248 | NE | ND (0.069) | ND (0.073) | ND (0.069) | ND (0.07) |
| Aroclor-1254 | NE | ND (0.069) | ND (0.073) | ND (0.069) | ND (0.07) |
| Aroclor-1260 | NE | ND (0.069) | ND (0.073) | ND (0.069) | ND (0.07) |
| Aroclor-1262 | NE | ND (0.069) | ND (0.073) | ND (0.069) | ND (0.07) |
| Aroclor-1268 | NE | ND (0.069) | ND (0.073) | ND (0.069) | ND (0.07) |

**TABLE 2**
**Summary of Landfill Disposal Characterization Soil Sampling Results**
**80 Wright Street, New Bedford, MA**

| Location | | Q01 | Q02 | Q03 | Q04 |
|---|---|---|---|---|---|
| Ramboll Sample ID | | SO-Q1-0-2 | SO-Q2-0-2 | SO-Q3-0-2 | SO-Q4-0-2 |
| Collection Depth (ft bgs) | MCP | 0 - 2 | 0 - 2 | 0 - 2 | 0 - 2 |
| Sample Method | RCS-2 | Direct Push | Direct Push | Direct Push | Direct Push |
| Sample Date | | 10/26/2021 | 10/26/2021 | 10/26/2021 | 10/26/2021 |
| Comments | | | | | |
| **Total Metals analyzed via EPA Method SW6010D** | | | | | |
| Arsenic | 20 | 1.23 (0.74) | 2.35 (0.69) | 0.91 (0.63) | 0.93 (0.73) |
| Barium | 3000 | 14.7 (0.37) | 39.4 (0.34) | 22.2 (0.32) | 9.92 (0.37) |
| Cadmium | 100 | ND (0.37) | 0.78 (0.34) | ND (0.32) | ND (0.37) |
| Chromium (total) | 200 | 4.99 (0.37) | 8.81 (0.34) | 4.86 (0.32) | 3.36 (0.37) |
| Lead | 600 | 26.5 (0.37) | 229 (0.34) | 8.72 (0.32) | 9.97 (0.37) |
| Selenium | 700 | ND (1.5) | ND (1.4) | ND (1.3) | ND (1.5) |
| Silver | 200 | ND (0.37) | ND (0.34) | ND (0.32) | ND (0.37) |
| **TCLP Metals analyzed via EPA Method SW6010D (mg/L)** | | | | | |
| Lead | NE | NA | 0.27 (0.10) | NA | NA |
| **Mercury analyzed via EPA Method SW7471** | | | | | |
| Mercury | 30 | ND (0.03) | 0.05 (0.03) | ND (0.03) | ND (0.03) |
| **Pesticides analyzed via EPA Method SW8151** | | | | | |
| 2-sec-Butyl-4,6-dinitrophenol (Dinoseb) | NE | ND (0.026) | ND (0.028) | ND (0.026) | ND (0.026) |
| 2,4-D | NE | ND (0.053) | ND (0.055) | ND (0.053) | ND (0.052) |
| Dalapon | NE | ND (0.026) | ND (0.028) | ND (0.026) | ND (0.026) |
| 2,4-DB | NE | ND (0.026) | ND (0.028) | ND (0.026) | ND (0.026) |
| Dicamba | NE | ND (0.026) | ND (0.028) | ND (0.026) | ND (0.026) |
| Dichloroprop | NE | ND (0.039) | ND (0.042) | ND (0.04) | ND (0.039) |
| MCPA (2-Methyl-4-chlorophenoxy acetic acid) | NE | ND (3.2) | ND (3.3) | ND (3.2) | ND (3.1) |
| Mecoprop | NE | ND (3.2) | ND (3.3) | ND (3.2) | ND (3.1) |
| 2,4,5-T | NE | ND (0.026) | ND (0.028) | ND (0.026) | ND (0.026) |
| 2,4,5-TP | NE | ND (0.026) | ND (0.028) | ND (0.026) | ND (0.026) |
| **Pesticides analyzed via EPA Method SW8081** | | | | | |
| Alachlor | NE | ND (0.0069) | ND (0.0073) | ND (0.0069) | ND (0.007) |
| Aldrin | NE | ND (0.0035) | ND (0.0037) | ND (0.0035) | ND (0.0035) |
| alpha-BHC | NE | ND (0.0069) | ND (0.0073) | ND (0.0069) | ND (0.007) |
| beta-BHC | NE | ND (0.0069) | ND (0.0073) | ND (0.0069) | ND (0.007) |
| delta-BHC | NE | ND (0.0069) | ND (0.0073) | ND (0.0069) | ND (0.007) |
| gamma-BHC | NE | ND (0.0014) | ND (0.0015) | ND (0.0014) | ND (0.0014) |
| Chlordane (total) | NE | ND (0.014) | ND (0.015) | ND (0.014) | ND (0.014) |
| 4,4'-DDD | NE | ND (0.0069) | ND (0.0073) | ND (0.0069) | ND (0.007) |
| 4,4'-DDE | NE | ND (0.0069) | ND (0.0073) | ND (0.0069) | ND (0.007) |
| 4,4'-DDT | NE | ND (0.0069) | ND (0.0073) | ND (0.0069) | ND (0.007) |
| Dieldrin | NE | ND (0.0035) | ND (0.0037) | ND (0.0035) | ND (0.0035) |
| Endosulfan I | NE | ND (0.0069) | ND (0.0073) | ND (0.0069) | ND (0.007) |
| Endosulfan II | NE | ND (0.0069) | ND (0.0073) | ND (0.0069) | ND (0.007) |
| Endosulfan sulfate | NE | ND (0.0069) | ND (0.0073) | ND (0.0069) | ND (0.007) |
| Endrin | NE | ND (0.0069) | ND (0.0073) | ND (0.0069) | ND (0.007) |
| Endrin aldehyde | NE | ND (0.0069) | ND (0.0073) | ND (0.0069) | ND (0.007) |
| Endrin ketone | NE | ND (0.0069) | ND (0.0073) | ND (0.0069) | ND (0.007) |
| Heptachlor | NE | ND (0.0069) | ND (0.0073) | ND (0.0069) | ND (0.007) |
| Heptachlor epoxide | NE | ND (0.0069) | ND (0.0073) | ND (0.0069) | ND (0.007) |
| Hexachlorobenzene | NE | ND (0.0035) | ND (0.0037) | ND (0.0035) | ND (0.0035) |
| Methoxychlor | NE | ND (0.035) | ND (0.037) | ND (0.035) | ND (0.035) |
| Toxaphene | NE | ND (0.14) | ND (0.15) | ND (0.14) | ND (0.14) |

**Notes:**

1 All concentrations are presented mg/kg unless noted otherwise.

2 Concentrations that exceed the MCP RCS-2, dated April 25,2014, are **boldfaced**.

**Abbreviations:**

NA -- Not Analyzed.
NE -- Not Established.
ND -- Not Detected.
( ) -- Detection Limit.
TCLP -- Toxicity Characteristic Leaching Procedure

# EXHIBIT C
# ACTIVITY AND USE LIMITATIONS

**MAIN TERMINAL (DRAFT) AUL**

**RTNS: 4-23736 4-24296, 4-15490**

Form 1075

NOTICE OF ACTIVITY AND USE LIMITATION
M.G.L. c. 21E, § 6 and 310 CMR 40.0000

Disposal Site Names: RIST Property (former RIST, LLC) RTN 4-23736
DMF Parcel 1, RTN 4-24296
DMF Parcel 2, RTN 4-15490
Riverfront Parcel

This Notice of Activity and Use Limitation ("Notice") is made as of this _____ day of _____, 2021, by The Massachusetts Clean Energy Technology Center, with a mailing address of 63 Franklin Street, 3rd Floor Boston, Massachusetts, 02110 and The City of New Bedford Massachusetts, with a mailing address of 133 Williams Street, New Bedford, Massachusetts 02740 together with his/her/its/their successors and assigns (collectively "Owners").

WITNESSETH:

WHEREAS, the Massachusetts Clean Energy Technology Center is the owner in fee simple of certain parcels of land depicted as:

**Parcel Name:** **RIST Property (former RIST, LLC), RTN 4-23736**
Address: North of Blackmer Street
Parcel ID/Size: Map 31 Parcel 288 / 7.75 acres

And, WHEREAS, the City of New Bedford, Massachusetts is the owner in fee simple of certain parcels of land, under lease to the Massachusetts Clean Energy Technology Center, and depicted as:

**Parcel Name:** **DMF Parcel 1, RTN 4-24296**
Address: North of 16 Blackmer Street
Parcel ID/Size: Map 25A, Parcel 53 / 1.2 acres

**Parcel Name:** **DMF Parcel 2, RTN 4-15490**
Address: 16 Blackmer Street
Parcel ID/Size: Map 25A, Parcel 49 / 2.2 acres

**Parcel Name:** **Riverfront Parcel**
Address: SE Blackmer Street
Parcel ID/Size: Map 25A, Parcel 48 / 9.227 acres
Area of Parcel Subject to AUL: 6.32 acres

WHEREAS, said four parcels of land, which are more particularly bounded and described in **Exhibit A**, attached hereto and made a part hereof ("Property"), are subject to this Notice of Activity and Use Limitation.

DRAFT

WHEREAS, the Properties together comprise all of a disposal site as the result of releases of oil and/or hazardous material. **Exhibit B** is a sketch plan showing the relationship of the Properties subject to this Notice of Activity and Use Limitation to the boundaries of said disposal site existing within the limits of the Properties and to the extent such boundaries have been established. **Exhibit B** is attached hereto and made a part hereof; and,

WHEREAS, one or more response actions have been selected for the Disposal Site in accordance with M.G.L. c. 21E ("Chapter 21E") and the Massachusetts Contingency Plan, 310 CMR 40.0000 ("MCP"). Said response actions are based upon (a) the restriction of human access to and contact with oil and/or hazardous material in soil and/or (b) the restriction of certain activities occurring in, on, through, over or under the Properties. A description of the basis for such restrictions, and the oil and/or hazardous material release event(s) or site history that resulted in the contaminated media subject to the Activity and Use Limitation Opinion which is attached hereto as **Exhibit C** and made a part hereof;

NOW, THEREFORE, notice is hereby given that the activity and use limitations set forth in this Notice of Activity and Use Limitation are as follows:

1. Activities and Uses Consistent with Maintaining No Significant Risk Conditions. The following Activities and Uses are consistent with maintaining a Permanent Solution and a condition of No Significant Risk and, as such, may occur on the Properties pursuant to 310 CMR 40.0000:

   (i) Commercial and industrial activities and uses which do not involve the disturbance of soil located greater than 3 feet below the ground surface within the AUL area within the RIST property, DMF Parcel 1 and DMF Parcel 2 and Riverfront Parcel properties described above, as long as the Obligations and Conditions specified herein are followed;
   (ii) Any non-residential uses of all of the Properties, including those that are currently conducted, in which a child's presence (other than incidental) is not likely;
   (iii) Short-term (6 months or less) underground utility and/or construction activities which are likely to disturb soil as described in Paragraph 1(i), provided that such activities are conducted in accordance with the soil management provisions of the Massachusetts Contingency Plan (MCP) cited at 310 CMR 40.0030 and all applicable worker health and safety practices pursuant to 310 CMR 40.0018;
   (iv) Construction or excavation activities are allowed, except as prohibited in Paragraph 2 (ii);
   (v) Such other activities or uses which, in the Opinion of a Massachusetts Licensed Site Professional ("LSP"), shall present no greater risk of harm to human health, safety, public welfare or the environment than the activities and uses set forth in this paragraph; and,
   (vi) Other activities or uses of the Properties not identified in Paragraph 2 as Activities and Uses Inconsistent with the AUL.

2. Activities and Uses Inconsistent Maintaining No Significant Risk Conditions. The following Activities and Uses are inconsistent with maintaining a Permanent Solution and a condition of No Significant Risk pursuant to 310 CMR 40.0000, and, as such, may not occur on the Properties:

DRAFT

(i) Use of the Properties (all) as a residence or for growing fruits or vegetables for human consumption, as a school, daycare, nursery, recreational area (such as a park or athletic field), and/or any other use in which a child's presence (other than incidental) is likely;

(ii) Any long-term (greater than 6 months) activity at the Properties that is reasonably likely to result in an excavation greater than 3 feet below grade within the RIST property, DMF Parcel 1, DMF Parcel 2 and Riverfront Parcel properties and excavation of soil at or below the ground surface within the Shuster Bulkhead Parcel, relocation or removal of contaminated soil, unless such activity is first evaluated by an LSP who renders an Opinion stating that such activity is consistent with maintaining a condition of No Significant Risk and that such activity is conducted in accordance with Obligations (i) and (ii), set forth below; and,

(iii) Any excavation activity which may disturb the soil located at a depth greater than 3 feet below ground surface within the AUL area associated with the RIST property, DMF Parcel 1, DMF Parcel 2 and Riverfront Parcel properties without prior development and implementation of a Soil Management Plan and a Health and Safety Plan in accordance with Obligations (i) and (ii) of this Notice.

3. Obligations and Conditions. The following obligations and/or conditions are necessary and shall be undertaken and/or maintained at the Properties to maintain a Permanent Solution and a condition of No Significant Risk:

(i) Any long-term (greater than 6 months) activity at or use of the Properties that is reasonably likely to result in the excavation, relocation, or removal of contaminated soil requires preparation and implementation of a Health and Safety Plan under the guidance of an LSP. At a minimum, the Health and Safety Plan must inform underground utility workers and other workers who may come into contact with soil in the AUL area of (1) the nature and hazards of the contaminants identified in the soil, (2) potential exposure routes, (3) measures to prevent exposure, (4) protective clothing requirements, and (5) any other health and safety measures appropriate for the activity or use;

(ii) Any long-term (greater than 6 months) activity at or use of the Properties that is reasonably likely to result in the excavation, relocation, or removal of the contaminated soil requires preparation and implementation of a written Soil Management Plan under the guidance of an LSP. At a minimum, the Soil Management Plan must (1) describe the soil excavation and stockpile storage methods that will be used to prevent accidental exposure to the excavated soil, including indirect exposure via surface water runoff or fugitive dust emissions, (2) contain procedures to limit access to the excavated soil and the excavation area by Property workers not covered by the Health and Safety Plan, children, Property abutters, or accidental trespassers, (3) contain procedures for characterizing, transporting and recycling/disposing excavated soil, and (4) provide for the restoration of the excavated area as soon as practicable; and,

(iii) Any soil removed from the Properties must be characterized and disposed of in accordance with federal, state and local regulations, including the MCP, 310 CMR 40.0000.

4. Proposed Changes in Activities and Uses. Any proposed changes in activities and uses at the Properties which may result in higher levels of exposure to oil and/or hazardous material than currently exist shall be evaluated by a Licensed Site Professional who shall render an Opinion,

in accordance with 310 CMR 40.1080, as to whether the proposed changes are inconsistent with maintaining a Permanent Solution and a condition of No Significant Risk. Any and all requirements set forth in the Opinion to meet the objective of this Notice shall be satisfied before any such activity or use is commenced.

5. Violation of a Permanent or Temporary Solution. The activities, uses and/or exposures upon which this Notice is based shall not change at any time to cause a significant risk of harm to health, safety, public welfare, or the environment or to create substantial hazards due to exposure to oil and/or hazardous material without the prior evaluation by a Licensed Site Professional in accordance with 310 CMR 40.1080, and without additional response actions, if necessary, to maintain a condition of No Significant Risk. If the activities, uses, and/or exposures upon which this Notice is based change without the prior evaluation and additional response actions determined to be necessary by a Licensed Site Professional in accordance with 310 CMR 40.1080, the owner or operator of the Properties subject to this Notice at the time that the activities, uses and/or exposures change, shall comply with the requirements set forth in 310 CMR 40.0020.

6. Incorporation into Deeds, Mortgages, Leases, and Instruments of Transfer. This Notice shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer, whereby an interest in and/or a right to use the Properties or a portion thereof is conveyed in accordance with 310 CMR 40.1074(5).

Owner hereby authorizes and consents to the filing and recordation and/or registration of this Notice, said Notice to become effective when executed under seal by the undersigned Licensed Site Professional, and recorded and/or registered with the appropriate Registry of Deeds and/or Land Registration Office(s).

WITNESS the execution hereof under seal this _____ day of _____, 20____.

_____
Name
Title
Massachusetts Clean Energy Technology Center

COMMONWEALTH OF MASSACHUSETTS

_____, ss _____, 20____

On this ____ day of _____, 2019, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)

DRAFT

(as attorney in fact for _____, the principal)
(as _____ for Massachusetts Clean Energy Technology Center (a) (the) _____)
_____ (official signature and seal of notary)

WITNESS the execution hereof under seal this _____ day of _____, 20____.

_____
Name
Title
City of New Bedford

COMMONWEALTH OF MASSACHUSETTS

_____, ss _____, 20____

On this ____ day of _____, 2019, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)

DRAFT

The undersigned Licensed Site Professional hereby certifies that in his Opinion this Notice of Activity and Use Limitation is consistent with a Permanent Solution and maintaining a condition of No Significant Risk.

Date: _____

_____
David B. Sherman
Licensed Site Professional

(Licensed Site Professional SEAL)

COMMONWEALTH OF MASSACHUSETTS

_____, ss _____, 20__

On this ____ day of _____, 2019, before me, the undersigned notary public, personally appeared _____, proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he)(she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)
_____ (official signature and seal of notary)

Upon recording, return to:

Apex Companies, LLC.
58H Connecticut Avenue
South Windsor, CT 06074

DRAFT

**NEW BEDFORD RADIO (HALL COMM) AUL**

**RTN: 4-25350**

(13)

2019 00022060
Bk: 12943 Pg: 240 Pg: 1 of 13 BE
Doc: NOTICE 09/27/2019 01:44

NOTICE OF ACTIVITY AND USE LIMITATION

M.G.L. c. 21E, § 6 and 310 CMR 40.0000
Disposal Site Name: New Bedford Radio, Inc. (Hall Comm.)
DEP Release Tracking No.: 4-25350

This Notice of Activity and Use Limitation ("Notice") is made as of this 16th day of September 2019, by The Massachusetts Clean Energy Center, with a mailing address of 63 Franklin Street, 3rd Floor Boston, New Bedford, Massachusetts, 02110, and Hall Communications, Inc. with a mailing address of 1996 Auction Road, Manheim, Pennsylvania, 17545 together with his/her/its/their successors and assigns (each an "Owner", and collectively "Owners").

WITNESSETH:

WHEREAS, the Massachusetts Clean Energy Center is the owner in fee simple of a certain parcel of land depicted as "Lot 1" on a that certain *Plan of Land, MacArthur Boulevard, Assessor's Map 31 Lot 234, New Bedford, Massachusetts,* dated March 18, 2015 (with revisions through July 13, 2016), and prepared by Thompson Farland with certification date August 8, 2016, and recorded in the Bristol County Registry of Deeds in Plan Book 174, Page 73 (the "Survey"), and Hall Communications, Inc. is the owner in fee simple of a certain parcel of land depicted as "Lot 2" on the Survey. Said "Lot 1" and said "Lot 2", having been created in a subdivision of land owned by Hall Communications, Inc. for the purpose of the sale of Lot 1 to the Massachusetts Clean Energy Center, and for Hall Communications, Inc. to retain Lot 2. For title information see deed recorded with the Bristol County Registry of Deeds in Book 11982, page 152.

WHEREAS, said parcels of land, which are more particularly bounded and described in **Exhibit A**, attached hereto and made a part hereof ("Property"), are subject to this Notice.

WHEREAS, the Property comprises all of a disposal site (the "AUL Area") as the result of releases of oil and/or hazardous material. **Exhibit B,** which is attached hereto and made a part hereof, is a copy of the Survey showing the Property subject to this Notice; and

WHEREAS, one or more response actions have been selected for the AUL Area in accordance with M.G.L. c. 21E ("Chapter 21E") and the Massachusetts Contingency Plan, 310 CMR 40.0000 *et seq.* ("MCP"). Said response actions are based upon (a) the restriction of human access to and contact with oil and/or hazardous material in soil at the Property, and/or (b) the restriction of certain activities occurring in, on, through, over or under the Property. A description of the basis for such restrictions, and the oil and/or hazardous material release event(s) or site history that resulted in the contaminated media subject to this Notice, are set forth in the Activity and Use Limitation Opinion, which is attached hereto as **Exhibit C** and made a part hereof;

NOW, THEREFORE, notice is hereby given that the activity and use limitations ("AULs") for the Property are as follows:

1. Activities and Uses Consistent with Maintaining No Significant Risk Conditions. The following Activities and Uses are consistent with maintaining a Permanent Solution and a condition of No Significant Risk and, as such, may occur on the Property pursuant to the MCP:

   (i) Commercial and industrial activities and uses which do not involve the disturbance of soil located greater than 3 feet below the ground surface within Lot 1 and

APEX COMPANIES LLC
Attn: DAVID SHERMAN
58 H Connecticut Ave
South Windsor, CT 06074

disturbance of soil at or below the ground surface within Lot 2, as long as the Obligations and Conditions specified herein are followed;

(ii) Any non-residential uses of the Property (both Lot 1 and Lot 2), including those that are currently conducted, in which a child's presence (other than incidental) is not likely;

(iii) Short-term (6 months or less) underground utility and/or construction activities which are likely to disturb soil more than permitted in Paragraph 1(i), provided that such activities are conducted in accordance with the soil management provisions of the MCP cited at 310 CMR 40.0030 and all applicable worker health and safety practices pursuant to 310 CMR 40.0018;

(iv) Construction or excavation activities are allowed, except as prohibited in Paragraph 2 (ii);

(v) Such other activities or uses which, in the Opinion of a Massachusetts Licensed Site Professional ("LSP"), shall present no greater risk of harm to human health, safety, public welfare or the environment than the activities and uses set forth in this Paragraph 1; and

(vi) Other activities or uses of the Property not identified in Paragraph 2 as Activities and Uses Inconsistent with maintaining a Permanent Solution and a condition of No Significant Risk.

2. Activities and Uses Inconsistent with Maintaining No Significant Risk Conditions. The following Activities and Uses are inconsistent with maintaining a Permanent Solution and a condition of No Significant Risk pursuant to the MCP, and, as such, may not occur on the Property:

(i) Use of the Property (Lot 1 and Lot 2) as a residence, for growing fruits or vegetables for human consumption, as a school, daycare, nursery, recreational area (such as a park or athletic field), and/or for any other use in which a child's presence (other than incidental) is likely;

(ii) Any long-term (greater than 6 months) activity at the Property that is reasonably likely to result in the excavation greater than 3 feet below grade in Lot 1 and at or below surface grade in Lot 2, relocation or removal of the contaminated soil, unless such activity is first evaluated by an LSP who renders an Opinion stating that such activity is consistent with maintaining a condition of No Significant Risk and that such activity is conducted in accordance with Obligations set forth in paragraph 3 (i) and (ii) of this Notice; and

(iii) Any excavation activity which may disturb the soil located at a depth greater than 3 feet below ground surface within Lot 1 and at or below surface grade in Lot 2, without prior development and implementation of a Soil Management Plan and a Health and Safety Plan in accordance with Obligations set forth in paragraph 3 (i) and (ii) of this Notice.

3. Obligations and Conditions. The following obligations and/or conditions are necessary and shall be undertaken and/or maintained at the Property by the Owner of either Lot 1 or Lot 2, or both, as applicable, to maintain a Permanent Solution and a condition of No Significant Risk:

(i) Any long-term (greater than 6 months) activity at or use of either Lot 1 or Lot 2 of the Property that is reasonably likely to result in the excavation, relocation, or removal of contaminated soil requires preparation and implementation of a Health and Safety Plan under the guidance of an LSP. At a minimum, the Health and Safety Plan must

inform underground utility workers and other workers who may come into contact with soil in the AUL Area of (1) the nature and hazards of the contaminants identified in the soil, (2) potential exposure routes, (3) measures to prevent exposure, (4) protective clothing requirements, and (5) any other health and safety measures appropriate for the activity or use;

(ii) Any long-term (greater than 6 months) activity at or use of either Lot 1 or Lot 2 of the Property that is reasonably likely to result in the excavation, relocation, or removal of the contaminated soil requires preparation and implementation of a written Soil Management Plan under the guidance of an LSP. At a minimum, the Soil Management Plan must (1) describe the soil excavation and stockpile storage methods that will be used to prevent accidental exposure to the excavated soil, including indirect exposure via surface water runoff or fugitive dust emissions, (2) contain procedures to limit access to the excavated soil and the excavation area by Property workers not covered by the Health and Safety Plan, children, Property abutters, or accidental trespassers, (3) contain procedures for characterizing, transporting and recycling/disposing excavated soil, and (4) provide for the restoration of the excavated area as soon as practicable; and

(iii) Any soil removed from either Lot 1 or Lot 2 of the Property must be characterized and disposed of in accordance with federal, state and local regulations, including the MCP.

4. Proposed Changes in Activities and Uses. Any proposed changes in activities and uses at the Property which may result in higher levels of exposure to oil and/or hazardous material than currently exist shall be evaluated by a LSP who shall render an Opinion, in accordance with 310 CMR 40.1080, as to whether the proposed changes are inconsistent with maintaining a Permanent Solution and a condition of No Significant Risk. Any and all requirements set forth in the Opinion to meet the objective of this Notice shall be satisfied before any such activity or use is commenced.

5. Violation of a Permanent or Temporary Solution. The activities, uses and/or exposures upon which this Notice is based shall not change at any time to cause a significant risk of harm to health, safety, public welfare, or the environment or to create substantial hazards due to exposure to oil and/or hazardous material without the prior evaluation by a LSP in accordance with 310 CMR 40.1080, and without additional response actions, if necessary, to maintain a condition of No Significant Risk. If the activities, uses, and/or exposures upon which this Notice is based change without the prior evaluation and additional response actions determined to be necessary by a LSP in accordance with 310 CMR 40.1080, the Owner of either Lot 1 or Lot 2 within the Property subject to this Notice at the time that the applicable activities, uses and/or exposures change on that particular Lot, shall comply with the requirements set forth in 310 CMR 40.0020.

6. Incorporation into Deeds, Mortgages, Leases, and Instruments of Transfer. This Notice shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer, whereby an interest in and/or a right to use the Property or a portion thereof is conveyed in accordance with 310 CMR 40.1074(5).

Owners hereby authorize and consent to the filing and recordation and/or registration of this Notice, said Notice to become effective when executed under seal by the undersigned LSP, and recorded and/or registered with the appropriate Registry of Deeds and/or Land Registration Office(s).

WITNESS the execution hereof under seal this 8th day of August, 2019.

By: _____
Name: Jennifer Daloisio
as: CFO
of Massachusetts Clean Energy Center

WITNESS the execution hereof under seal this 23rd day of August, 2019.

By: _____
Janet P. Hamm, CPA, CGMA
as CFO of Hall Communications, Inc.

COMMONWEALTH OF MASSACHUSETTS

Suffolk County, ss August 8, 2019

On this 8 day of August, 2019, before me, the undersigned notary public, personally appeared Jennifer Daloisio, proved to me through satisfactory evidence of identification, which were person known to me, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose as CFO for the Massachusetts Clean Energy Technology Center, an independent public instrumentality of the Commonwealth of Massachusetts.

_____ (official signature and seal of notary)

ALEXANDRA ZALTMAN
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
September 9, 2022

STATE OF FLORIDA

County of Polk, ss August 23, 2019

On this 23 day of August, 2019, before me, the undersigned notary public, personally appeared Janet P. Hamm, proved to me through satisfactory evidence of identification, which were known to me, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose as CFO of Hall Communications, Inc., a Delaware corporation.

_____ (official signature and seal of notary)

LISA M. GIFFORD
Commission # GG 167582
Expires January 3, 2022
Bonded Thru Troy Fain Insurance 800-385-7019

The undersigned Licensed Site Professional hereby certifies that in his Opinion this Notice of Activity and Use Limitation is consistent with a Permanent Solution and maintaining a condition of No Significant Risk.

Date: 9/16/2019

David B. Sherman
Licensed Site Professional

(Licensed Site Professional SEAL)

COMMONWEALTH OF MASSACHUSETTS

_____, ss September 16, 2019

On this 16 day of September, 2019, before me, the undersigned notary public, personally appeared David Sherman, proved to me through satisfactory evidence of identification, which were person known to me, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he)(she) signed it voluntarily for its stated purpose.

China Starks
Notary Public-Connecticut
My Commission Expires
May 31, 2022

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)

China Starks (official signature and seal of notary)

Upon recording, return to:

Apex Companies, LLC.
58H Connecticut Avenue
South Windsor, CT 06074

# Exhibit A

## Metes and Bounds Description of Parcel of Land Containing Area Subject to AUL

A certain parcel of land situated on the southeasterly side of Macarthur Drive in New Bedford, Massachusetts, being shown as Lots 1 and 2 on a plan entitled "Plan of Land, Macarthur Boulevard, Assessors Map 31 Lot 234, New Bedford, Massachusetts, Prepared for Apex Companies, LLC, revised July 13, 2016" prepared by Thompson Farland, Inc, being further bounded and described as follows:

Beginning at a point on the southeasterly side of Macarthur Drive, said point being the northeasterly corner of land now or formerly belonging to Carlos and Conceicao Rafael and the northwesterly corner of the herein describer parcel;

Thence running along said Macarthur Drive by a curve deflecting to the left, having a radius of 155.00 feet and an arc length of 182.67 feet to a corner and land now or formerly belonging to C P Brodeur, Inc;

Thence turning and running by said C P Brodeur, Inc land, S11°43'37"E, 148.08 feet to a corner;

Thence turning and running still by said C P Brodeur, Inc land and land now or formerly belong to R C P Realty LLC and Dennis Saluti "Trustee", Michael St. Ours "Trustee", N75°39'17"E, 440.37 feet to a corner and land now or formerly belonging to Rist LLC;

Thence turning and running along said Rist LLC land, S14°20'43"E, 389.25 feet to a corner and land now or formerly belonging to Fargo Realty Trust;

Thence turning and running along said Fargo Realty Trust land and land now or formerly belonging to DeCosta Realty Trust, S76°40'51"W, 504.23 feet to a corner and land now or formerly belonging to Gregory G. White and David R. Belzer, Trustees;

Thence turning and running along said Gregory G.White and David R. Belzer, Trustees land and land now or formerly belonging to Carlos and Conceicao Rafael, N07°51'03"W, 314.29 feet to a corner;

Thence running still by said Rafael land, N46°24'07"W, 81.49 feet to a point of curvature;

Thence running still by said Rafael land by a curve deflecting to the left, having a radius of 20.00 feet and an arc length of 27.37 feet to Macarthur Drive and the point of beginning.

Said Lots 1 (MassCEC; Map 31 Lot 234) and Lot 2 (Hall Communications, Inc.; Map 31 Lot 234) contain a total area of 4.40 Acres more or less.

# EXHIBIT B - Activity & Use Limitation

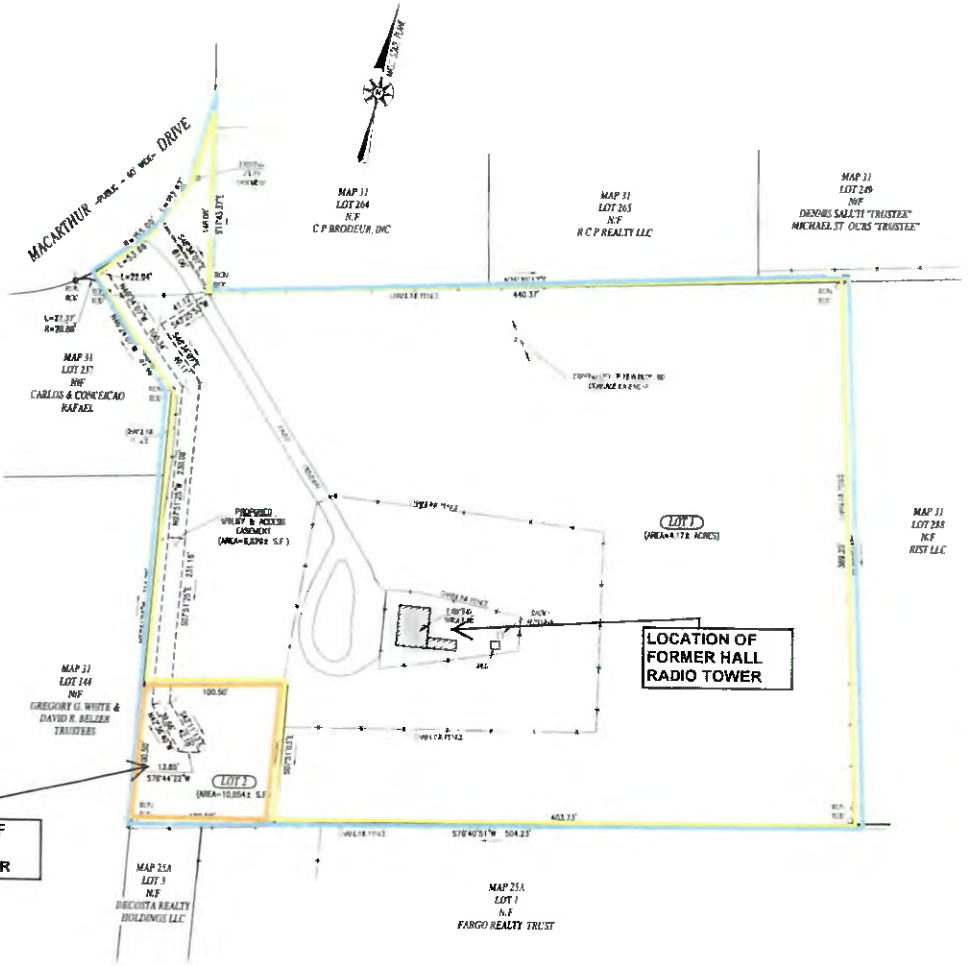
LOCUS MAP SCALE: 1"=2,000'±

## – ZONING DATA –

DISTRICT: WATERFRONT INDUSTRIAL

| DESCRIPTION | REQUIRED |
|---|---|
| LOT AREA | 0 S.F |
| LOT FRONTAGE | 0 FT |
| FRONT SETBACK | 10 FT |
| SIDE SETBACK | 10 FT |
| REAR SETBACK | *10 FT |

*REAR SETBACK EQUALS 20 FEET FOR STRUCTURES OVER 3 STORIES




**LEGEND**

DISPOSAL SITE BOUNDARY (RTN 4-25350)

AREA SUBJECT TO AUL (LOT 1)

AREA SUBJECT TO AUL (LOT 2)

FOR REGISTRY USE ONLY

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS

BRIAN M. MURPHY, P.L.S. — 7/13/2016 DATE

NEW BEDFORD PLANNING BOARD

APPROVAL UNDER THE SUBDIVISION CONTROL LAW NOT REQUIRED

DATE: _____

**NOTES:**

1. THE PURPOSE OF THIS PLAN IS TO SUBDIVIDE EXISTING ASSESSORS MAP 31, LOT 234 INTO LOT 1 AND LOT 2 AND TO CREATE AN ACCESS AND UTILITY EASEMENT TO BENEFIT LOT 2.
2. BOUNDARY AND DETAIL SURVEY PERFORMED BY THOMPSON FARLAND, INC. IN MARCH 2014.
3. ENDORSEMENT OF THIS PLAN AND THE PROPOSED UTILITY AND ACCESS EASEMENT WILL NOT AFFECT THE CITY OF NEW BEDFORD'S DRAINAGE EASEMENT.

RECORD OWNER:
NEW BEDFORD RADIO INC
C/O HALL COMMUNICATIONS, INC
75 OXFORD STREET, SUITE 402
PROVIDENCE, RI 02905
DEED BOOK 1536 PAGE 1120
DEED BOOK 1568 PAGE 576
DEED BOOK 1717 PAGE 56

PLAN REFERENCES:
PLAN BOOK 157 PAGE 74
PLAN BOOK 187 PAGE 49
PLAN BOOK 99 PAGE 71

REVISIONS

| | | |
|---|---|---|
| 1 | 6/2/16 | EASEMENT REVISION |
| 2 | 7/8/16 | PLANNING BOARD COMMENTS |
| 3 | 7/13/16 | NOTE REVISION |


THOMPSONFARLAND
PROFESSIONAL ENGINEERS // LAND SURVEYORS
www.ThompsonFarland.com
(MAIN OFFICE) 301 COUNTY STREET, NEW BEDFORD, MA 02740 P.(508) 717-4479
NEW BEDFORD | TAUNTON | HARWICH | HOLLISTON


DRAWN BY: CKC
DESIGNED BY:
CHECKED BY: BJM

PLAN OF LAND
—MACARTHUR BOULEVARD—
ASSESSORS MAP 31 LOT 234
NEW BEDFORD, MASSACHUSETTS

PREPARED FOR: APEX COMPANIES, LLC
184 HIGH STREET, SUITE 502
BOSTON, MA 02210

MARCH 18, 2015
SCALE: 1"=40'
JOB NO. 10-540
LATEST REVISION: JULY 13, 2015

SHEET 1 OF 1

## ACTIVITY AND USE LIMITATION OPINION

RTN 4-25350

### 1.0 Introduction

This Licensed Site Professional (LSP) Opinion for the Notice of Activity and Use Limitation (AUL) was prepared by David B. Sherman (LSP No. 8904) on behalf of the Massachusetts Clean Energy Center (MassCEC) and N B Radio, Inc. c/o Hall Communications, for release conditions at the parcel of land located at ES R S Front Street, in New Bedford, Bristol County, Massachusetts (the Property). The MassDEP has assigned Release Tracking Number (RTN) 4-25350 to this site. The Disposal Site is comprised of 2 lots (Lot 1 and Lot 2). Lot 1 is currently owned by the MassCEC and Lot 2 is currently owned by Hall Communications and is also the location of the new radio tower. This LSP Opinion was prepared in accordance with 310 CMR 40.1074 and (1) explains why implementation of the AUL is appropriate to maintain a level of No Significant Risk at the Property (as defined in the AUL), (2) describes activities and uses prohibited in the area of the Property to be subject to the AUL, (3) identifies permitted activities and uses in the AUL area, and (4) identifies conditions or obligations for the AUL area in order to maintain a level of No Significant Risk.

The referenced parcel is part of the New Bedford Marine Commerce Terminal (Terminal) project constructed under the direction of the USEPA, by virtue of a State Enhanced Remedy provision (dated July 1, 2013) of the New Bedford Harbor Superfund Site Record of Decision, and the Final Determination for the South Terminal Project, dated November 16, 2012 and its subsequent modifications. While crafting the Final Determination, EPA:

- reviewed historic data associated with previous uses of some of the properties involved in the project;
- reviewed historic environmental investigations conducted to date on some of the properties involved in the project;
- directed the Commonwealth to conduct environmental investigations on certain properties associated with the project;
- requested proposals for environmental remediation on certain properties associated with the project, and reviewed and accepted those proposals;
- requested commitments from the MassCEC with regard to future maintenance of the existing, 3-foot engineered environmental cap on certain properties associated with the project.

EPA directly regulated the environmental investigations and proposed remediation for the New Bedford Marine Commerce Terminal project as completed by the Massachusetts Clean Energy Center (MassCEC). EPA also had an active role in regulating the investigations and proposed remediation for the project, and some aspects of the 21E/MCP process were reviewed and regulated by EPA. Additionally, various elements of MassCEC's appropriate response actions were listed in the Final Determination. The MassDEP provided an Adequately Regulated Determination for the Marine Commerce Terminal Project in a letter dated July 1, 2013, under 310 CMR 40.0110 of the Massachusetts Contingency Plan.

### 2.0 Property Background

Multiple environmental investigations on the property have identified elevated levels of polychlorinated biphenyls, metals (lead and cadmium) and polycyclic aromatic hydrocarbons (PAHs) in soil, likely attributed to the presence of historic urban fill emplaced along the New Bedford waterfront area. As the

northeastern portion of the site was found to contain the most elevated concentrations of contaminants in soil, an environmental engineered cap consisting of 3 feet of imported, clean engineered fill was placed over the entire footprint to Lot 1 with the upper twelve-inches comprised of an engineered dense aggregate substrate. Based on the presence of substantially lower contaminant concentrations and federal restrictions regarding the height of the new radio tower located on Lot 2, this portion of the property did not receive the 3 feet of imported clean engineered fill. The construction activity was completed as detailed in the Release Abatement Measure Plan submitted to the MassDEP in October 20, 2014.

The Terminal project involved the construction of a multi-purpose facility designed to support the construction, assembly and deployment of offshore wind projects, as well as handle bulk, break-bulk, container and large specialty marine cargo. The Terminal is a 26-acre property that was designed to serve as a staging area for various cargoes associated with the Terminal operations. From 2013 to 2015 the entire Terminal property was remediated and backfilled with a minimum of 3 feet of clean imported engineered fill. The fill material for preparing the subgrade beneath the site was either generated during the associated Terminal channel dredging or imported fill from landside aggregate facilities. The fill material was placed in lifts and compacted to bring the final grade of the Terminal property to existing street level. An eight-foot tall security fence has been installed around the perimeter of the main Terminal property. Extensive site assessment activities and remedial actions involving localized soil excavation and removal have been conducted on the property to characterize and abate impacts to underlying subsurface media. These areas were subsequently backfilled and capped with clean materials.

The Property is relatively square in shape with maximum dimensions of 390 feet by 420 feet, encompassing an area of approximately 4.40 acres. The Property is bordered by Seatrade International to the west, North Coast Seafood to the south, the former RIST, LLC parcel to the east and C.P. Brodeur, Inc. to the north. This parcel was recently subdivided in accordance with the ANR plan dated March 18, 2015. Lot 1 of Parcel A is currently owned by the Massachusetts Clean Energy Center (MassCEC). Lot 2 of Parcel A is currently owned by NB Radio, Inc.

Current site features and parcel descriptions are depicted on **Exhibit B** to this AUL.

### 2.1 Disposal Site Description

| | |
|---|---|
| **Parcel Name:** | **Former Hall Radio Tower - RTN 4-25350** |
| Address: | ES R S Front Street |
| Parcel ID/Size: | Book 1536 Page 1120/ 4.40 acres (total) |
| Current Owner: | MassCEC Lot 1, NB Radio, Inc. Lot 2 |
| Date Reported: | October 1, 2014 |
| MCP Status: | Permanent Solution with Conditions |

This property is currently a portion of the New Bedford Marine Commerce Terminal and is situated between Potomska Street to the north and South Front Street to the west. During subsurface investigations conducted between October 2014 and May 2016, concentrations of polychlorinated biphenyls, lead, cadmium and select PAH compounds were identified above reportable concentrations. The majority of this impact was found in the northeastern portion of Lot 1. Soil impacts in this area were excavated and

removed and 3 feet of clean, imported engineered fill was placed throughout the entire foot print of Lot 1 as an engineered environmental cap. The AUL area encompasses the entire site (Lot 1 and Lot 2) to prevent exposure to the soils.

In addition to the subsurface investigations and Release Abatement Measure (RAM) activities conducted between October 2014 and August 2016, additional remedial activities were completed over the entire New Bedford Marine Commerce Terminal Property. The remedial (RAM) activities completed at this subject property included:

- Removal of 1,876 tons of PCB, metals, total petroleum hydrocarbons and PAH impacted soil to out of state landfills under a Hazardous Waste Manifest to the Heritage Environmental Services in Roachdale, Indiana facilities;
- In accordance with the EPA's Final Determination for the South Terminal Project, soils containing concentrations of PCBs up to 50ppm were allowed to be left in place and capped as described below;
- General grading of the Disposal Site; and
- Construction of an environmental engineered cap over Lot 1 consisting of 3 feet of clean, imported engineered fill, the upper twelve-inches of which was comprised of a mixed, dense aggregate engineered layer.

**3.0 Summary of the Risk Characterization**

A Method 3 Risk Characterization has been prepared by Apex in anticipation of regulatory (MCP) site closure. The results of the risk characterization are the basis for the decision regarding the Permanent Solution with Conditions (PSC) for the release at the Site pursuant to 310 CMR 40.1000. A summary of the Risk Characterization is presented below.

The contaminants of concern identified at the site included, polychlorinated biphenyls (PCBs); certain polyaromatic hydrocarbons (PAHs) and certain metals (lead and cadmium).

The Terminal Property is currently a marine cargo facility that acts as a storage and staging area for marine vessels and cargo operations. Under foreseeable future conditions, receptors reasonably likely to be present on site include workers, security personnel, escorted visitors, vessel crews, trespassers, landscapers, utility workers, and construction workers. Lot 2, currently owned by Hall Communications, is occupied by a new, 600-foot tall radio tower used for transmission services for FM broadcasting. The Method 3 Risk Characterization determined that "No Significant Risk" of harm to human health exists at the Site for each receptor type considered in the risk characterization based on current and foreseeable uses. It also determined that "No Significant Risk" of harm to safety, public welfare and the environment exists at all portions of the Site. As a result of the risk characterization, an AUL is required to limit residential, and certain other construction uses of the property. In addition, due to the presence of elevated concentrations of compounds of concern in soil, the AUL includes requirements for soil management if soil intrusive work is planned to be conducted. The property is included in its entirety (Lot 1 and Lot 2) within the Disposal Site Boundary for RTN 4-25350.

**4.0 Use of the AUL to Maintain a Level of No Significant Risk**

As described in the Risk Characterization, a condition of No Significant Risk to human health, safety, public welfare and the environment currently exists at the Site. However, this conclusion is based on the assumption that the Property will not be used for residential purposes or for the growing of fruits or

vegetables for human consumption. This restriction is extended to limit the use of the Property as a school, daycare, nursery, recreational area (such as a park or athletic field) and/or any other use in which a child's presence is likely to be more than incidental. All other reasonably foreseeable site uses were considered. In addition, because residual contamination is present at the site, this AUL will also provide appropriate notice to future Site users to exercise appropriate caution when encountering or handling soil, and ensure that unnecessary exposures do not occur and that contaminated soils are managed appropriately.

**5.0 Acceptable Activities and Uses**

The AUL Opinion provides that a condition of No Significant Risk to health, safety, or public welfare exists for any foreseeable period of time (pursuant to 310 CMR 40.0000) as long as any of the following activities and uses occur on the Property:

(i) Commercial and industrial activities and uses which do not involve the disturbance of soil located greater than 3 feet below the ground surface within the entire footprint of Lot 1 and at or below surface grade within the entire footprint of Lot 2, as long as the Obligations and Conditions specified herein are followed;

(ii) Any non-residential uses of the Property, including those that are currently conducted, in which a child's presence (other than incidental) is not likely;

(iii) Short-term (6 months or less) underground utility and/or construction activities which are likely to disturb soil, provided that such activities are conducted in accordance with the soil management provisions of the Massachusetts Contingency Plan (MCP) cited at 310 CMR 40.0030 and all applicable worker health and safety practices pursuant to 310 CMR 40.0018;

(iv) Construction or excavation activities are allowed, except as prohibited in Paragraph 6 (ii);

(v) Such other activities or uses which, in the Opinion of a Massachusetts Licensed Site Professional ("LSP"), shall present no greater risk of harm to human health, safety, public welfare or the environment than the activities and uses set forth in this paragraph; and

(vi) Other activities or uses of the Property not identified in Paragraph 6 as Activities and Uses Inconsistent with the AUL.

**6.0 Restricted Activities and Uses**

Activities and uses that are inconsistent with the objectives of this Notice of AUL, and that, if implemented at the Site, may result in a significant risk of harm to human health, safety, or public welfare, are as follows:

(i) Use of the Property as a residence or for growing fruits or vegetables for human consumption, as a school, daycare, nursery, recreational area (such as a park or athletic field), and/or any other use in which a child's presence (other than incidental) is likely;

(ii) Any long-term (greater than 6 months) activity at the Property that is reasonably likely to result in the excavation greater than 3 feet below grade within the entire footprint of Lot 1 or excavation at or below surface grade within the entire footprint of Lot 2, relocation or removal of the contaminated soil, unless such activity is first evaluated by an LSP who renders an Opinion stating that such activity is consistent

with maintaining a condition of No Significant Risk and that such activity is conducted in accordance with Obligations (1) and (2), set forth below; and

(iii) Any excavation activity which may disturb the soil located at a depth greater than 3 feet below ground surface within the entire footprint of Lot 1 and/or disturbance of soil located at or below surface grade within the entire footprint of Lot 2 AUL area, without prior development and implementation of a Soil Management Plan and a Health and Safety Plan in accordance with Obligations (i) and (ii) of this Notice.

**7.0 Obligations for the AUL Area**

If applicable, obligations and/or conditions to be undertaken and/or maintained at the Site to maintain a condition of No Significant Risk, as set forth in the AUL Opinion, shall include the following:

1. Any long-term (greater than 6 months) activity at or use of the Property that is reasonably likely to result in the excavation, relocation, or removal of the contaminated soil requires preparation and implementation of a **Health and Safety Plan** under the guidance of an LSP. At a minimum, the Health and Safety Plan must inform underground utility workers and other workers who may come into contact with soil in the AUL area of (1) the nature and hazards of the contaminants identified in the soil, (2) potential exposure routes, (3) measures to prevent exposure, (4) protective clothing requirements, and (5) any other health and safety measures appropriate for the activity or use;

2. Any long-term (greater than 6 months) activity at or use of the Property that is reasonably likely to result in the excavation, relocation, or removal of the contaminated soil requires preparation and implementation of a written **Soil Management Plan** under the guidance of an LSP. At a minimum, the Soil Management Plan must (1) describe the soil excavation and stockpile storage methods that will be used to prevent accidental exposure to the excavated soil, including indirect exposure via surface water runoff or fugitive dust emissions, (2) contain procedures to limit access to the excavated soil and the excavation area by Property workers not covered by the Health and Safety Plan, children, Property abutters, or accidental trespassers, (3) contain procedures for characterizing, transporting and recycling/disposing excavated soil, and (4) provide for the restoration of the excavated area as soon as practicable; and

3. Any soil removed from the Property, other than the clean overburden and backfill, must be characterized and disposed of in accordance with federal, state and local regulations, including the MCP 310 CMR 40.0000.

4. The engineered environmental cap constructed within the entire footprint of Lot 1 must be regularly inspected, maintained, repaired and/or replaced with a comparable cap to prevent future exposure to underlying contaminated soil immediately following the completion of any activity that involves its removal and/or disturbance.

5. The engineered environmental cap constructed over Lot 1 shall consist of at least 3 feet of clean engineered fill material such as Dense Graded Aggregate or an engineer and LSP approved equal, or 6 inches of pavement or a building.

## 8.0 Summary and Conclusions

This LSP Opinion has been prepared for implementation of a Notice of AUL for a release at the ES R S Front Street Property, (Registry of Deeds Book 1536, Page 1120) in New Bedford, Bristol County, Massachusetts. A Method 3 Risk Characterization indicates that restrictions on activities and uses of this Property are required to maintain a condition of No Significant Risk to human health, safety or public welfare. In general, use of the Property for residential purposes, growing fruits or vegetables for human consumption, or any other use in which a child 's presence (other than incidental) is likely, are to be limited as set forth in Section 6.0. In addition, activities and uses that may result in the excavation, relocation, or removal of contaminated soil at the Property may be permitted with certain precautions.

Date: 9/16/2019

David B. Sherman, LSP

LSP Seal:

**DMF PARCEL 2 AUL**

**RTN: 4-15490**

BK 9630 PG 39
02/03/10 09:19 DOC. 2648
Bristol Co. S.D.

CONFIRMATORY NOTICE OF ACTIVITY AND USE LIMITATION
M.G.L. c. 21E, § 6 and 310 CMR 40.0000

Disposal Site Name: Former Standard Times Site - Lot 3, 16 Blackmer Street, New Bedford, MA
DEP Release Tracking No.(s): 4-15490

This Confirmatory Notice of Activity and Use Limitation ("Notice") is made as of this 2nd day of February, 2010, by the Commonwealth of Massachusetts Department of Fish and Game located at 251 Causeway Street, Suite 400, Boston, Massachusetts 02114, together with his/her/its/their successors and assigns (collectively "Owner").

W I T N E S S E T H:

WHEREAS, the Commonwealth of Massachusetts Department of Fish and Game, is the owner in fee simple of that certain parcel of vacant land located in New Bedford, Bristol County, Massachusetts, pursuant to a deed recorded with the Bristol County Registry of Deeds (Southern District) in Book 7642, Page 344;

WHEREAS, said parcel of land, which is more particularly bounded and described in Exhibit A, attached hereto and made a part hereof ("Property") is subject to this Notice of Activity and Use Limitation. The Property is shown on a plan recorded in the Bristol County Registry of Deeds (Southern District) in Plan Book 148, Plan 92,

WHEREAS, a portion of the Property ("Portion of the Property") is subject to this Notice of Activity and Use Limitation. The Portion of the Property is more particularly bounded and described in Exhibit A-1, attached hereto and made a part hereof. The Portion of the Property is shown on a plan recorded with the Bristol County Registry of Deeds (Southern District) in Plan Book 163, Plan 106, and/or on a sketch plan attached hereto and filed herewith for registration;

WHEREAS, the Portion of the Property comprises part of a disposal site as the result of a release of oil and/or hazardous material. Exhibit B is a sketch plan showing the relationship of the Portion of the Property subject to this Notice of Activity and Use Limitation to the boundaries of said disposal site existing within the limits of the Property and to the extent such boundaries have been established. Exhibit B is attached hereto and made a part hereof; and

WHEREAS, one or more response actions have been selected for the Portion of the Disposal Site in accordance with M.G.L. c. 21E ("Chapter 21E") and the Massachusetts Contingency Plan, 310 CMR 40.0000 ("MCP"). Said response actions are based upon (a) the restriction of human access to and contact with oil and/or hazardous material in soil and/or (b) the restriction of certain activities occurring in, on, through, over or under the Portion of the Property. The basis for such restrictions is set forth in an Activity and Use Limitation Opinion ("AUL Opinion"), dated March 5, 2009 (which is

attached as Exhibit C of the original Notice of Activity and Use Limitation dated March 9, 2009, and recorded with the Registry of Deeds in Book 9289, Page 7.

NOW, THEREFORE, notice is hereby given that the activity and use limitations set forth in said AUL Opinion are as follows:

1. Activities and Uses Consistent with the AUL Opinion. The AUL Opinion provides that a condition of No Significant Risk to health, safety, public welfare or the environment exists for any foreseeable period of time (pursuant to 310 CMR 40.0000) so long as any of the following activities and uses occur on the Portion of the Property:

(i) Commercial and industrial activities and uses including, but not limited to, vehicular parking, pedestrian and vehicular traffic, passive recreation, landscaping, routine maintenance or any other use that does not compromise the structural integrity of the protective barrier, as defined in 3.(iv) and/or disturb contaminated soil located directly beneath the barrier;

(ii) Excavation associated with emergency or short term (three months or less) underground utility and/or construction work, provided it is conducted in accordance with a Soil Management Plan and a Health and Safety Plan in accordance with Obligations (i) and (ii) of this Notice; and involves the repair and/or replacement of the protective barrier with a comparable barrier immediately following the completion of the project;

(iii) Activities and uses that are not identified by this Notice as being inconsistent with maintaining a condition of No Significant Risk; and

(iv) Such other activities and uses which, in the Opinion of an LSP, shall present no greater risk of harm to health, safety, public welfare, or the environment than the activities and uses set forth in this paragraph.

2. Activities and Uses Inconsistent with the AUL Opinion. Activities and uses that are inconsistent with the objectives of this Notice of Activity and Use Limitation, and which, if implemented at the Portion of the Property, may result in a significant risk of harm to health, safety, public welfare or the environment or in a substantial hazard, are as follows:

(i) Use of the Property as a residence, school, nursery, daycare, recreational area and/or other such use at which a child's regular presence is likely

(ii) Activities and/or uses which are likely to involve the removal and/or disturbance of the protective barrier in the AUL Area and/or the disturbance of the contaminated soil located beneath the protective barrier without prior development of a Soil Management Plan and a Health and Safety Plan in accordance with Obligations (i) and (ii) of the LSP Opinion;

(iii) Relocation of the contaminated soil from beneath the protective barrier in the AUL Area unless an LSP renders an Opinion that states such relocation is consistent with maintaining a condition of No Significant Risk; and

(iv) Activities and/or uses that may cause physical or chemical deterioration, breakage, or structural damage to the protective barrier.

3. Obligations and Conditions Set Forth in the AUL Opinion. If applicable, obligations and/or conditions to be undertaken and/or maintained at the Portion of the Property to maintain a condition of No Significant Risk as set forth in the AUL Opinion shall include the following:

(i) A Soil Management Plan must be prepared by an LSP and implemented prior to the commencement of any activity that is likely to disturb the contaminated soil located immediately beneath the protective barrier. The Soil Management Plan must be prepared in accordance with the guidelines discussed in the Activity and Use Limitation opinion attached hereto as Exhibit C of the original Notice of Activity and Use Limitation;

(ii) A Health and Safety Plan must be prepared and implemented in accordance with the guidelines discussed in the Activity and Use Limitation Opinion attached hereto as Exhibit C of the original Notice of Activity and Use Limitation prior to the commencement of any activity that involves the removal and/or disturbance of the protective barrier and/or is likely to disturb the underlying contaminated soil within the AUL Area;.

(iii) The protective barrier within the AUL Area must be repaired and/or replaced with a comparable barrier to prevent future exposures to underlying contaminated soil immediately following the completion of any activity that involves its removal and/or disturbance;

(iv) The protective barrier shall consist of either a minimum of 3-inches of asphalt pavement (or concrete), 3-feet of clean soil or a building

(v) The protective barrier must be maintained within the designated AUL area to ensure that the contaminated soil located beneath the barrier remains inaccessible; and

(vi) Annual inspections and associated record-keeping activities must be performed to confirm that the barrier is being properly maintained to prevent exposure(s) to contaminated soil located immediately beneath the protective barrier.

4. Proposed Changes in Activities and Uses. Any proposed changes in activities and uses at the Portion of the Property that may result in higher levels of exposure to oil and/or hazardous material than currently exist shall be evaluated by an LSP who shall render an Opinion, in accordance with 310 CMR 40.1080 *et seq.*, as to whether the proposed changes will present a significant risk of harm to health, safety, public welfare or the environment. Any and all requirements set forth in the Opinion to meet the objective of this Notice shall be satisfied before any such activity or use is commenced.

5. Violation of a Response Action Outcome. The activities, uses and/or exposures upon which this Notice is based shall not change at any time to cause a significant risk of harm to health, safety, public welfare, or the environment or to create substantial hazards due to exposure to oil and/or hazardous material without the prior evaluation by an LSP in accordance with 310 CMR 40.1080 *et seq.*, and without additional response actions, if necessary, to achieve or maintain a condition of No Significant Risk or to eliminate substantial hazards.

If the activities, uses, and/or exposures upon which this Notice is based change without the prior evaluation and additional response actions determined to be necessary by an LSP in accordance with 310 CMR 40.1080 *et seq.*, the owner or operator of the Portion of the Property subject to this Notice at the time that the activities, uses and/or exposures change, shall comply with the requirements set forth in 310 CMR 40.0020.

6. Incorporation Into Deeds, Mortgages, Leases, and Instruments of Transfer. This Notice shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer, whereby an interest in and/or a right to use the Property or a portion thereof is conveyed.

Owner hereby authorizes and consents to the filing and recordation and/or registration of this Confirmatory Notice, said Confirmatory Notice to become effective when executed under seal by the undersigned LSP, and recorded and/or registered with the appropriate Registry(ies) of Deeds and/or Land Registration Office(s).

This Confirmatory Notice of Activity and Use Limitation is given to correct

the inadvertent error(s) made in the Notice of Activity and Use Limitation dated March 9, 2009, and recorded with the Registry of Deeds in Book 9289, Page 7, said error(s) being as follows:

(i) Exhibit B of the recorded Notice of Activity and Use Limitation did not properly depict AUL limits relative to the defined Site boundaries.

The corrected Site Sketch has been provided and attached hereto as Exhibit B. In all other respects, the terms of the Notice of Activity and Use Limitation remain unchanged.

WITNESS the execution hereof under seal this 20th day of January, 2010.

Commonwealth of Massachusetts, Department of Fish and Game

Mary B. Griffin

By: Mary B. Griffin
Commissioner

COMMONWEALTH OF MASSACHUSETTS

Bristol, ss January 20, 2010

On this 20th day of January, 2010, before me, the undersigned notary public, personally appeared Mary B. Griffin, proved to me through satisfactory evidence of identification, which were personally known, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose as Commissioner of the Commonwealth of Massachusetts Department of Fish and Game.

GLENDA L. DiFILIPPO
NOTARY PUBLIC
Commonwealth of Massachusetts
My Commission Expires
October 31, 2014

Glenda L DiFilippo

The undersigned LSP hereby certifies that he executed the aforesaid Activity and Use Limitation Opinion attached hereto as Exhibit C and made a part hereof and that in his Opinion this Confirmatory Notice of Activity and Use Limitation is consistent with the terms set forth in said Activity and Use Limitation Opinion.

Date: Feb 2, 2010

Kevin J. Beaulieu, LSP

COMMONWEALTH OF MASSACHUSETTS

Bristol, ss February 2, 2010

On this 2nd day of February, 2010, before me, the undersigned notary public, personally appeared Kevin J. Beaulieu, proved to me through satisfactory evidence of identification, which were personally known, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose as LSP for Commonwealth of Massachusetts Department of Fish and Game.

Notary Public, Linda Mayo
My Commission Expires: 1/21/2011

Upon recording, return to:

Commonwealth of Massachusetts Department of Fish and Game
251 Causeway Street, Suite 400
Boston, MA 02114

**EXHIBIT A**

(Description of Parcel of Land Containing Area Subject to AUL)

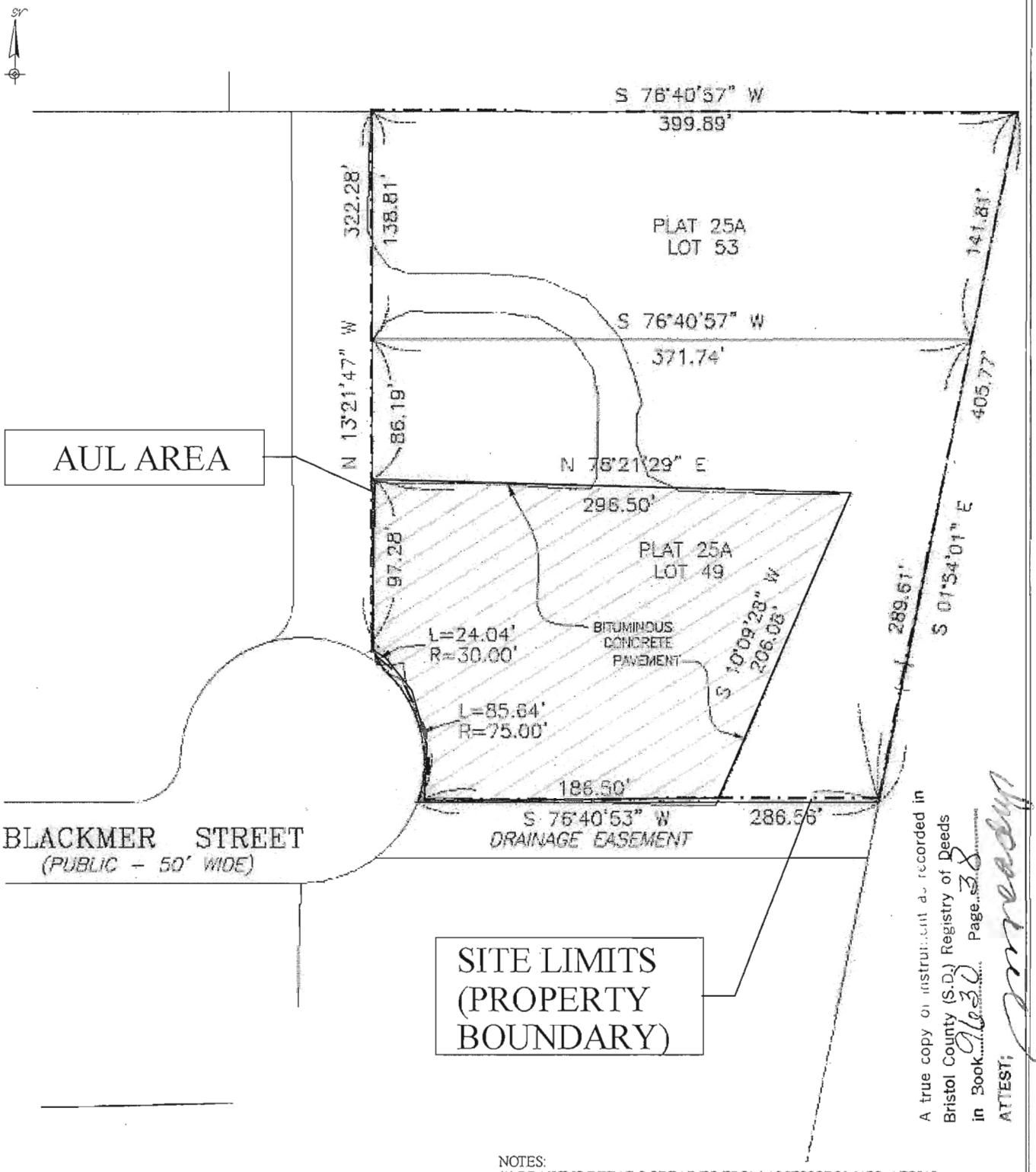
A certain parcel of land shown as Lot 3B on a Plan entitled "Approval Not Required Plan of Land located in New Bedford, MA prepared for City of New Bedford Redevelopment Authority", Scale 1"=60', dated November 21, 2001, prepared by Kenneth R. Ferreira Engineering, Inc., New Bedford, MA, recorded in the Bristol County Registry of Deeds in Plan Book 148 at Page 92, and being more particularly bounded and described as follows:

| | |
|---|---|
| BEGINNING | at a point on the easterly side of a cul-de-sac of said Blackmer Street marking the southwest corner of the parcel herein described as shown on said Plan; thence |
| Northwesterly | on a curve to the left with a radius of 75.00 feet an arc distance of 85.64 feet by said cul-de-sac of Blackmer Street to a point as shown on said Plan; thence |
| Northerly | on a curve to the right with a radius of 30.00 feet an arc distance of 24.04 feet by said cul-de-sac of Blackmer Street and by Lot 2B to a point as shown on said Plan; thence |
| N 13° 21' 47" W | one hundred eighty-three and 45/100 (183.45) feet by said Lot 2B to a point marking the northwest corner of the parcel herein described and the southwest corner of Lot 3A as shown on said Plan; thence |
| S 76° 40' 57" W | three hundred seventy-one and 74/100 (371.74) feet by said Lot 3A to a point marking the northeast corner of the parcel herein described and the southeast corner of said Lot 3A as shown on said Plan; thence |
| S 01° 54' 01" E | two hundred eighty-nine and 61/100 (289.61) feet to a point as shown on said Plan; thence |
| S 76° 40' 53" W | two hundred ninety-six and 56/100 (296.56) feet to the PLACE OF BEGINNING, containing 95,197 square feet of land, more or less, as shown on said Plan. |

**EXHIBIT A-1**
(Description of Area Subject to AUL)

That certain portion of a parcel of land, said parcel of land being situated in New Bedford, Bristol County, Massachusetts, and being shown as Lot 3B on the aforementioned plan recorded with said Deeds in Plan Book 148, Page 92, said portion being shown as the "Activity and Use Limitation Area" on a plan entitled, "Activity and Use Limitation Plan of Land in New Bedford, MA", dated December 2, 2008, Scale 1"=40', prepared by SITEC, Inc., Dartmouth, Massachusetts, and recorded with the Bristol County Registry of Deeds in Plan Book 163, Page 106 and being more particularly bounded and described as follows:

| | |
|---|---|
| BEGINNING | AT A POINT IN THE EASTERLY SIDELINE OF BLACKMER STREET, SAID POINT BEING THE SOUTHWEST CORNER OF THE PARCEL SHOWN AS LOT 3B ON PLAN RECORDED AT PLAN BOOK 148 PAGE 92 IN THE BRISTOL COUNTY REGISTRY OF DEEDS; THENCE |
| NORTHWESTERLY | ON A CURVE TO THE LEFT WITH A RADIUS OF 75.00 FEET AN ARC DISTANCE OF 85.64 FEET TO A POINT; THENCE |
| NORTHERLY | ON A CURVE TO THE RIGHT WITH A RADIUS OF 30.00 FEET AN ARC DISTANCE OF 24.04 FEET TO A POINT; THENCE |
| N 13°21 '47" W | NINETY-SEVEN AND 28/100 FEET (97.28') TO A POINT; THENCE |
| N 78°21'29" E | TWO HUNDRED NINETY-SIX AND 50/100 FEET (296.50') TO A POINT; THENCE |
| S 10°09'28" W | TWO HUNDRED SIX AND 08/100 FEET (206.08') TO A POINT; THENCE |
| S 76°40'53" W | ONE HUNDRED EIGHTY-SIX AND 50/100 FEET (186.50') TO THE POINT OF BEGINNING, CONTAINING 47,368 SQUARE FEET OF LAND, MORE OR LESS. |




A true copy of instrument as recorded in Bristol County (S.D.) Registry of Deeds in Book 9630 Page 38
ATTEST: [signature] REGISTER

NOTES:
(1) DRAWING DETAILS OBTAINED FROM ASSESSORS MAPS, AERIAL PHOTOGRAPHS, SURVEY PLANS GENERATED BY SITEC ENGINEERING INC. AND FIELD OBSERVATIONS. ALL SCALES ARE APPROXIMATE

| | | | |
|---|---|---|---|
| DRAWN BY: KJB<br>PROJ. MGR: KJB<br>PROJECT NO: W024<br>SCALE: 1" = 100'<br>DATE: 12/04/08 | GRAPHICAL SCALE<br>0 50 100 200<br>COMMON SENSE ENVIRONMENTAL, INC.<br>50 THERESA STREET<br>DARTMOUTH, MASSACHUSETTS 02748<br>PHONE: 508-991-3491 | SKETCH PLAN<br>COMMERCIAL PROPERTY<br>16 BLACKMER STREET<br>NEW BEDFORD, MASSACHUSETTS | EXHIBIT:<br>B |

Bristol County Southern District
25 N. 6th Street
New Bedford, Massachusetts 02740

02/03/10

COMMON SENSE ENVIRON SA

| | | | |
|---|---|---|---|
| # 8 Rec:time 919 Type | NAUL | | 50.00 |
| DOC. 2648 BK 9630-0038 | C. P. | | 20.00 |
| | R. D. | | 5.00 |
| # 9 Copies | | | 9.00 |
| Total | | | 84.00 |
| # 10 Payment Check | | | 84.00 |

THANK YOU! J. Mark Treadup
Register of Deeds

# FORMER DARTMOUTH FINISHING SITE AUL

# RTN: 4-23616

BK 11656 PG 310
04/14/16 11:04 DOC. 7877
Bristol Co. S.D.

NOTICE OF ACTIVITY AND USE LIMITATION

M.G.L. c. 21E, § 6 and 310 CMR 40.0000
Disposal Site Name: Former Dartmouth Finishing
DEP Release Tracking No.: 4-23616

This Notice of Activity and Use Limitation ("Notice") is made as of this 14th day of April, 2016, by The City of New Bedford, 133 Williams Street, New Bedford, Massachusetts, together with his/her/its/their successors and assigns (collectively "Owner").

WITNESSETH:

WHEREAS, The City of New Bedford, is the owner in fee simple of that certain parcel of vacant land located in New Bedford, Bristol County, Massachusetts, pursuant to a deed recorded with the Bristol County South Registry of Deeds in Book 8689 Page 93

WHEREAS, said parcel of land, which is more particularly bounded and described in Exhibit A, attached hereto and made a part hereof ("Property") is subject to this Notice of Activity and Use Limitation. The Property is shown on a plan recorded in the Bristol County Registry of Deeds in Plan Book 34, Plan 26;

WHEREAS, the Property comprises all of a disposal site as the result of releases of oil and/or hazardous material. Exhibit B is a sketch plan showing the relationship of the Property subject to this Notice of Activity and Use Limitation to the boundaries of said disposal site existing within the limits of the Property and to the extent such boundaries have been established. Exhibit B is attached hereto and made a part hereof; and

WHEREAS, one or more response actions have been selected for the Disposal Site in accordance with M.G.L. c. 21E ("Chapter 21E") and the Massachusetts Contingency Plan, 310 CMR 40.0000 ("MCP". Said response actions are based upon (a) the restriction of human access to and contact with oil and/or hazardous material in soil and/or (b) the restriction of certain activities occurring in, on, through, over or under the Property. A description of the basis for such restrictions, and the oil and/or hazardous material release event(s) or site history that resulted in the contaminated media subject to the Notice of Activity and Use Limitation which is attached hereto as Exhibit C and made a part hereof;

NOW, THEREFORE, notice is hereby given that the activity and use limitations set forth in this Notice of Activity and Use Limitation are as follows:

1. Activities and Uses Consistent with Maintaining No Significant Risk Conditions. The following Activities and Uses are consistent with maintaining a Permanent Solution and a condition of No Significant Risk and, as such, may occur on the Property pursuant to 310 CMR 40.0000:

   (i) Commercial and industrial activities and uses which do not involve the disturbance of soil located greater than 3 feet below the ground surface within the AUL area, as long as the Obligations and Conditions specified herein are followed;
   (ii) Any non-residential uses of the Property, including those that are currently conducted, in which a child's presence (other than incidental) is not likely;
   (iii) Short-term (6 months or less) underground utility and/or construction activities which are likely to disturb soil, provided that such activities are conducted in accordance with the soil management provisions of the Massachusetts Contingency Plan (MCP) cited at 310 CMR 40.0030 and all applicable worker health and safety practices pursuant to 310 CMR 40.0018;
   (iv) Construction or excavation activities are allowed, except as prohibited in Paragraph 2 (ii);
   (v) Such other activities or uses which, in the Opinion of a Massachusetts Licensed Site Professional ("LSP"), shall present no greater risk of harm to human health, safety, public welfare or the environment than the activities and uses set forth in this paragraph; and
   (vi) Other activities or uses of the Property not identified in Paragraph 2 as Activities and Uses Inconsistent with the AUL.

2. Activities and Uses Inconsistent Maintaining No Significant Risk Conditions. The following Activities and Uses are inconsistent with maintaining a Permanent Solution and a condition of No Significant Risk pursuant to 310 CMR 40.0000, and, as such, may not occur on the Property:

(i) Use of the Property as a residence or for growing fruits or vegetables for human consumption, as a school, daycare, nursery, recreational area (such as a park or athletic field), and/or any other use in which a child's presence (other than incidental) is likely;

(ii) Any long-term (greater than 6 months) activity at the Property that is reasonably likely to result in the excavation greater than 3 feet below grade, relocation or removal of the contaminated soil, unless such activity is first evaluated by an LSP who renders an Opinion stating that such activity is consistent with maintaining a condition of No Significant Risk and that such activity is conducted in accordance with Obligations (i) and (ii), set forth below; and

(iii) Any excavation activity which may disturb the soil located at a depth greater than 3 feet below ground surface within the AUL area, without prior development and implementation of a Soil Management Plan and a Health and Safety Plan in accordance with Obligations (i) and (ii) of this Notice.

3. Obligations and Conditions. The following obligations and/or conditions are necessary and shall be undertaken and/or maintained at the Property to maintain a Permanent Solution and a condition of No Significant Risk:

(i) Any long-term (greater than 6 months) activity at or use of the Property that is reasonably likely to result in the excavation, relocation, or removal of contaminated soil requires preparation and implementation of a Health and Safety Plan under the guidance of an LSP. At a minimum, the Health and Safety Plan must inform underground utility workers and other workers who may come into contact with soil in the AUL area of (1) the nature and hazards of the contaminants identified in the soil, (2) potential exposure routes, (3) measures to prevent exposure, (4) protective clothing requirements, and (5) any other health and safety measures appropriate for the activity or use;

(ii) Any long-term (greater than 6 months) activity at or use of the Property that is reasonably likely to result in the excavation, relocation, or removal of the contaminated soil requires preparation and implementation of a written Soil Management Plan under the guidance of an LSP. At a minimum, the Soil Management Plan must (1) describe the soil excavation and stockpile storage methods that will be used to prevent accidental exposure to the excavated soil, including indirect exposure via surface water runoff or fugitive dust emissions, (2) contain procedures to limit access to the excavated soil and the excavation area by Property workers not covered by the Health and Safety Plan, children, Property abutters, or accidental trespassers, (3) contain procedures for characterizing, transporting and recycling/disposing excavated soil, and (4) provide for the restoration of the excavated area as soon as practicable;

(iii) Any soil removed from the Property, other than the clean backfill and overburden, must be characterized and disposed of in accordance with federal, state and local regulations, including the MCP, 310 CMR 40.0000.

4. Proposed Changes in Activities and Uses. Any proposed changes in activities and uses at the Property which may result in higher levels of exposure to oil and/or hazardous material than currently exist shall be evaluated by a Licensed Site Professional who shall render an Opinion, in accordance with 310 CMR 40.1080, as to whether the proposed changes are inconsistent with maintaining a Permanent Solution and a condition of No Significant Risk. Any and all requirements set forth in the Opinion to meet the objective of this Notice shall be satisfied before any such activity or use is commenced.

5. Violation of a Permanent or Temporary Solution. The activities, uses and/or exposures upon which this Notice is based shall not change at any time to cause a significant risk of harm to health, safety, public welfare, or the environment or to create substantial hazards due to exposure to oil and/or hazardous material without the prior evaluation by a Licensed Site Professional in accordance with 310 CMR 40.1080, and without additional response actions, if necessary, to maintain a condition of No Significant Risk. If the activities, uses, and/or exposures upon which this Notice is based change without the prior evaluation and additional response actions determined to be necessary by a Licensed Site Professional in accordance with 310 CMR 40.1080, the owner or operator of the Property subject to this Notice at the time that the activities, uses and/or exposures change, shall comply with the requirements set forth in 310 CMR 40.0020.

6. Incorporation into Deeds, Mortgages, Leases, and Instruments of Transfer. This Notice shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer, whereby an interest in and/or a right to use the Property or a portion thereof is conveyed in accordance with 310 CMR 40.1074(5).

Owner hereby authorizes and consents to the filing and recordation and/or registration of this Notice, said Notice to become effective when executed under seal by the undersigned Licensed Site Professional, and recorded and/or registered with the appropriate Registry of Deeds and/or Land Registration Office(s). Exhibit D, attached hereto, is an Affidavit of Authority of signature for Renee Fernandes.

WITNESS the execution hereof under seal this 14th day of April, 2016.

Renee Fernandes
Treasurer/Collector
City of New Bedford

COMMONWEALTH OF MASSACHUSETTS

Bristol, ss APRIL 14, 2016

On this 14 day of APRIL, 2016, before me, the undersigned notary public, personally appeared Renee Fernandes, proved to me through satisfactory evidence of identification, which were MA LIC., to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose.

as Treasurer/Collector for The City of New Bedford, the

(official signature and seal of notary)

DEBORAH L. GONZAGA
MY COMM. EXPIRES JUNE 18, 2021
NOTARY PUBLIC COMMONWEALTH OF MASSACHUSETTS

The undersigned Licensed Site Professional hereby certifies that in his Opinion this Notice of Activity and Use Limitation is consistent with a Permanent Solution and maintaining a condition of No Significant Risk.

Date: April 14, 2016

Michael P. Bingham
Licensed Site Professional
Apex Companies, LLC

(Licensed Site Professional SEAL)

COMMONWEALTH OF MASSACHUSETTS
MICHAEL P. BINGHAM No. 4141 REGISTERED
LICENSED SITE PROFESSIONAL

COMMONWEALTH OF MASSACHUSETTS

Bristol, ss APRIL 14, 2016

On this 14 day of APRIL, 2016, before me, the undersigned notary public, personally appeared Michael P. Bingham, proved to me through satisfactory evidence of identification, which were MA LIC., to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he)(she) signed it voluntarily for its stated purpose.

(official signature and seal of notary)

DEBORAH L. GONZAGA
MY COMM. EXPIRES JUNE 18, 2021
NOTARY PUBLIC COMMONWEALTH OF MASSACHUSETTS

Upon recording, return to:

Apex Companies, LLC.
125 Broad Street, 5th Floor
Boston, MA 02110

# Exhibit A

## Metes and Bounds Description of Parcel of Land Containing Area Subject to AUL

A certain parcel of land being shown as Activities and Use Limitation (AUL) on a plan recorded herewith. More particularly described as follows:

Beginning at a point in the north line of Cove Street distant easterly therein from the east line of Harbor Street two hundred fifty-six and 47/100 (256.47) feet; thence northerly by land of Naushon Mill, Inc., a distance of eight hundred fifty-eight and 80/100 (858.80) feet to a corner; thence easterly by last named land a distance of two hundred four and 51/100 (204.51) feet to a corner; thence southeasterly by said last named land a distance of seventeen and 1/100 (17.01) feet to a point; thence southerly a distance of twenty two and 52/100 (22.52) feet to a point; thence easterly a distance of fourteen and 80/100 (14.80) feet to a point in the westerly face of an existing two-story brick building; thence southerly by line of last named building a distance of four hundred twenty-eight and 56/100 (428.56) feet to a point; thence westerly a distance of twenty-two and 14/100 (22.14) feet to a point; thence southerly a distance of three hundred fifty-six and 80/100 (356.80) feet to a point in the north line of Cove Street being easterly therein four hundred seventy-two and 67/100 (472.67) feet from the east line of Harbor Street; thence westerly in said north line of Cove Street a distance of one hundred forty-six (146) feet to a point of curvature; thence westerly in the said north line of Cove Street along the arc of a circle having a radius of 488.72 feet a distance of seventy and 20/100 (70.20) feet to the point of beginning.

BK 11656 PG 315

LOCUS MAP SCALE: 1"=2,000'±

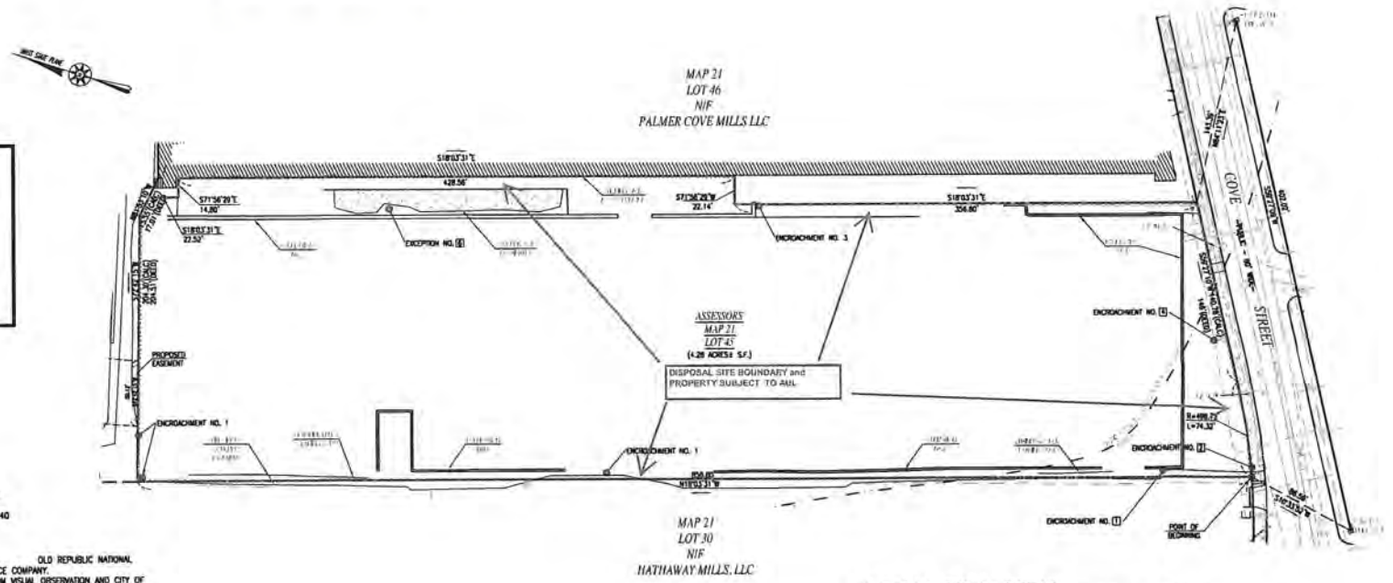
**LEGAL DESCRIPTION:**
THE LAND IN NEW BEDFORD, BRISTOL COUNTY, MASSACHUSETTS, WITH THE BUILDINGS THEREON, BOUNDED AND DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT IN THE NORTH LINE OF COVE STREET DISTANT EASTERLY THEREIN FROM THE EAST LINE OF HARBOR STREET TWO HUNDRED FIFTY-SIX AND 47/100 (256.47) FEET; THENCE NORTHERLY BY LAND OF NAUSHON MILL, INC., A DISTANCE OF EIGHT HUNDRED FIFTY-EIGHT AND 80/100 (858.80) FEET TO A CORNER; THENCE EASTERLY BY LAST NAMED LAND A DISTANCE OF TWO HUNDRED FOUR AND 51/100 (204.51) FEET TO A CORNER; THENCE SOUTHEASTERLY BY SAID LAST NAMED LAND A DISTANCE OF SEVENTEEN AND 01/100 (17.01) FEET TO A POINT; THENCE SOUTHERLY A DISTANCE OF TWENTY-TWO AND 52/100 (22.52) FEET TO A POINT; THENCE EASTERLY A DISTANCE OF FOURTEEN AND 80/100 (14.80) FEET TO A POINT IN THE WESTERLY FACE OF AN EXISTING TWO-STORY BRICK BUILDING; THENCE SOUTHERLY BY A LINE OF LAST NAMED BUILDING A DISTANCE OF FOUR HUNDRED TWENTY-EIGHT AND 56/100 (428.56) FEET TO A POINT; THENCE WESTERLY A DISTANCE OF TWENTY-TWO AND 14/100 (22.14) FEET TO A POINT; THENCE SOUTHERLY A DISTANCE OF THREE HUNDRED FIFTY-SIX AND 80/100 (356.80) FEET TO A POINT IN THE NORTHERLY LINE OF COVE STREET; BEING EASTERLY THEREIN FOUR HUNDRED SEVENTY-TWO AND 67/100 (472.67) FEET FROM THE EAST LINE OF HARBOR STREET; THENCE WESTERLY IN THE SAID NORTH LINE OF COVE STREET A DISTANCE OF ONE HUNDRED FORTY-SIX (146) FEET TO A POINT OF CURVATURE; THENCE WESTERLY IN THE SAID NORTH LINE OF COVE STREET ALONG THE ARC OF A CIRCLE HAVING A RADIUS OF 488.72 FEET A DISTANCE OF SEVENTY AND 20/100 (70.20) FEET TO THE POINT OF BEGINNING.
SAID LAND IS SHOWN ON PLAN SHOWING LAND CONVEYED BY THE CITY OF NEW BEDFORD TO SPENCER GREEN DATED MAY 1942, MADE BY ABEL A. VALENTE C.E. FILED IN THE BRISTOL COUNTY S.D. REGISTRY OF DEEDS IN PLAN BOOK 34 PAGE 26.

**SURVEYOR'S DESCRIPTION (DISCREPANCIES UNCOVERED DURING COURSE OF SURVEY):**
THE LAND IN NEW BEDFORD, BRISTOL COUNTY, MASSACHUSETTS, WITH THE BUILDINGS THEREON, BOUNDED AND DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT IN THE NORTH LINE OF COVE STREET DISTANT EASTERLY THEREIN FROM THE EAST LINE OF HARBOR STREET TWO HUNDRED FIFTY-SEVEN AND 92/100 (257.92) FEET; THENCE NORTHERLY BY LAND OF NAUSHON MILL, INC., A DISTANCE OF EIGHT HUNDRED FIFTY-EIGHT AND 80/100 (858.80) FEET TO A CORNER; THENCE EASTERLY BY LAST NAMED LAND A DISTANCE OF TWO HUNDRED FOUR AND 30/100 (204.30) FEET TO A CORNER; THENCE SOUTHEASTERLY BY SAID LAST NAMED LAND A DISTANCE OF FIFTEEN AND 55/100 (15.55) FEET TO A POINT; THENCE SOUTHERLY A DISTANCE OF TWENTY-TWO AND 52/100 (22.52) FEET TO A POINT; THENCE EASTERLY A DISTANCE OF FOURTEEN AND 80/100 (14.80) FEET TO A POINT IN THE WESTERLY FACE OF AN EXISTING TWO-STORY BRICK BUILDING; THENCE SOUTHERLY BY A LINE OF LAST NAMED BUILDING A DISTANCE OF FOUR HUNDRED TWENTY-EIGHT AND 56/100 (428.56) FEET TO A POINT; THENCE WESTERLY A DISTANCE OF TWENTY-TWO AND 14/100 (22.14) FEET TO A POINT; THENCE SOUTHERLY A DISTANCE OF THREE HUNDRED FIFTY-SIX AND 80/100 (356.80) FEET TO A POINT IN THE NORTHERLY LINE OF COVE STREET; BEING EASTERLY THEREIN FOUR HUNDRED SEVENTY-THREE AND 03/100 (473.02) FEET FROM THE EAST LINE OF HARBOR STREET; THENCE WESTERLY IN THE SAID NORTH LINE OF COVE STREET A DISTANCE OF ONE HUNDRED FORTY AND 78/100 (140.78) FEET TO A POINT OF CURVATURE; THENCE WESTERLY IN THE SAID NORTH LINE OF COVE STREET ALONG THE ARC OF A CIRCLE HAVING A RADIUS OF 498.72 FEET A DISTANCE OF SEVENTY-FOUR AND 32/100 (74.32) FEET TO THE POINT OF BEGINNING.

**LEGEND**

| EXISTING | DESCRIPTION |
|---|---|
| | PROPERTY LINE |
| | CHAIN LINK FENCE |
| | WATER LINE |
| | WATER GATE |
| | HYDRANT |
| | SEWER LINE |
| | SEWER MANHOLE |
| | DRAIN LINE |
| | DRAIN MANHOLE |
| | CATCH BASIN |
| | GAS LINE |
| | GAS GATE |

EXHIBIT B




**RECORD OWNER:**
CITY OF NEW BEDFORD
133 WILLIAM STREET
NEW BEDFORD, MA 02740

**NOTES:**
1. TITLE POLICY: OLD REPUBLIC NATIONAL LAND TITLE INSURANCE COMPANY.
2. UTILITIES TAKEN FROM VISUAL OBSERVATION AND CITY OF NEW BEDFORD RECORDS.
3. NO BUILDINGS EXISTING ON SURVEYED PROPERTY.

**PLAN REFERENCES:**
PLAN BOOK 34 PAGE 26

**FLOOD NOTE:**
BY GRAPHIC PLOTTING ONLY, THE PROPERTY DEPICTED ON THIS PLAN FALLS IN ZONE "X" AND "AE" (EL.5), AS SHOWN ON THE FLOOD INSURANCE RATE MAP No. 25005C0481F EFFECTIVE DATE: JULY 7, 2009

**ENCROACHMENTS:**
1. PAVEMENT ONTO LOCUS
2. CHAINLINK FENCE ONTO COVE STREET
3. FOUNDATION WALL ONTO MAP 21 LOT 46
4. WATER LINE AND HYDRANT ONTO LOCUS

0' 40' 80' 120'
1" = 40'

**SCHEDULE B – SECTION 2 – EXCEPTIONS:**
6. RIGHTS RESERVED IN AN AREA MARKED AS "B" ON THE PLAN REFERRED TO IN EXHIBIT "A" FOR PURPOSES OF REPAIRING, MAINTAINING AND RENEWING ANY PART OF THE BUILDING ON LAND TO THE EAST OF THE INSURED PREMISES AS SET FORTH IN A DEED FROM THE CITY OF NEW BEDFORD TO SPENCER GREEN DATED MAY 26, 1942 AND RECORDED IN BOOK 854 PAGE 482. (SHOWN ON PLAN)
7. EASEMENT FOR UTILITY PURPOSES GRANTED BY NASH REALTY CORP. TO NAUSHON MILL, INC. IN AN INSTRUMENT RECORDED ON NOVEMBER 17, 1942 IN BOOK 862 PAGE 378. (NOT PLOTTABLE)

**CERTIFICATION:**
TO APEX COMPANIES, LLC, CITY OF NEW BEDFORD, OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 7A, 7b, 8, 11a, 11b AND 18 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON MAY 18, 2012.

REVISIONS

THOMPSONFARLAND
PROFESSIONAL ENGINEERS // LAND SURVEYORS
www.ThompsonFarland.com
(MAIN OFFICE) 396 COUNTY STREET, NEW BEDFORD, MA 02740 P.508.717.2479
NEW BEDFORD | TAUNTON | CAMBRIDGE | MARLBOROUGH

DRAWN BY: SMB
DESIGNED BY:
CHECKED BY: BJM

# ALTA ACSM LAND TITLE
COVE STREET
ASSESSORS MAP 21 LOT 45
NEW BEDFORD, MASSACHUSETTS

PREPARED FOR: APEX COMPANIES, LLC
184 HIGH STREET, SUITE 502
BOSTON, MA 02210

JULY 13, 2012
SCALE: 1"=40'
JOB NO. 10-540
LATEST REVISION:

SHEET 1 OF 1

BK 11656 PG 316

# ACTIVITY AND USE LIMITATION OPINION

## 1.0 Introduction

This Licensed Site Professional (LSP) Opinion for the Notice of Activity and Use Limitation (AUL) was prepared by Michael Bingham (LSP No. 4141) on behalf of The City of New Bedford, for release conditions at the 45 Cove Street property in New Bedford, Bristol County, Massachusetts (the Property). The MassDEP has assigned Release Tracking Number (RTN) 4-23616 to this site. This LSP Opinion was prepared in accordance with 310 CMR 40.1074 and (1) explains why implementation of the AUL is appropriate to maintain a level of No Significant Risk at the Property (as defined in the AUL), (2) describes activities and uses prohibited in the area of the Property to be subject to the AUL, (3) identifies permitted activities and uses in the AUL area, and (4) identifies conditions or obligations for the AUL area in order to maintain a level of No Significant Risk.

## 2.0 Property Background

The Property consists of one vacant parcel totaling approximately 4.304 acres located at 45 Cove Street in New Bedford, Massachusetts. The Property was previously improved with a single story brick building that occupied most of the Property and was formerly occupied by Dartmouth Finishing, a fabric finishing and dyeing business, which abandoned the property in 1994. . The building demolition was completed in 2002, and except for soil stockpile and demolition debris the Property has remained vacant since. The City acquired the Property as a tax foreclosure in June 2007.

The Property was identified to be redeveloped by the nearby Marine Commerce Terminal in New Bedford (Terminal) project. The Terminal project involved the construction of a multi-purpose facility designed to support the construction, assembly and deployment of offshore wind projects, as well as handle bulk, break-bulk, container and large specialty marine cargo. The Property was selected to serve as a staging area for various cargoes associated with the Terminal operations. In 2015 the Property was graded and at least 5 feet of clean dredge material and dense graded aggregate, generated during the MCT channel dredging, was brought in to bring the final grade to street level and a fence was installed around the perimeter.

Current site features are depicted on Exhibit B to this AUL.

## 2.1 Disposal Site Description

A Notice of Noncompliance (NON) was issued by MassDEP to Dartmouth Finishing in 1994 for violations of state hazardous waste, air quality, and industrial wastewater programs. MassDEP and the EPA responded to a notification in 1997 by the New Bedford Fire Department that OHM present in corroded drums in the former Site building represented a threat of release. The MassDEP issued RTN 4-12810 for the Site on January 21, 1997. A total of 480 drums varying in size from 40 gallons to 85 gallons, one aboveground tank, four vats, and two No. 6 fuel oil underground storage tanks (USTs) were inventoried by the EPA. A removal action included pumping oil from the two USTs, removing sludge from the vats and troughs in the basement, and removing 480 drums of OHM for off-site disposal to abate the identified imminent hazard and stabilize site conditions.

An Immediate Response Action (IRA) for RTN 4-12810 was completed at the Property in 2004 and included the removal of two 10,000-gallon USTs and approximately 80 cubic yards of petroleum-impacted soil. Based on the results of the 2004 subsurface investigation and the completion of a Method 1 Risk Characterization, an Immediate Response Action Completion Statement and Class A-2 Response Action Outcome Statement were submitted in August 2004 for RTN 4-12810 by Roberts Consulting in August 2004. The contaminants of concern in the RAO and Method 3 Risk Characterization, identified below the concrete basement slab, were: arsenic, lead, and petroleum compounds. Mr. Charles Kibbee, of G & L Bedford Realty, Inc. was listed as the owner of the property.

Additional subsurface investigation was completed at the property as due diligence for a property transfer in 2012, which identified a new reportable release. The 2012 Phase II CSA investigation identified contaminant concentrations in soil and groundwater above applicable MassDEP Reportable Concentrations (RCs) at the Site. Specifically, the report identified additional contaminants of concern and areas of release in soil and groundwater beneath the concrete slab at the Site that were inconsistent with the previous RAO submittal filed for the Site with the MassDEP in 2004. In addition, the analysis of stockpiled soil staged above the slab identified contaminant concentrations greater than regulatory reportable thresholds. These soils were not previously sampled as part of the prior RAO and are located above the slab, suggesting a different exposure assumption. Also, the investigation identified concentrations of dissolved silver in groundwater above applicable reporting criteria, which was not addressed in the previous RAO findings. The detection of new contaminants of concern concentrations in soil and groundwater was reported on October 3, 2011 under a 120-day notification obligation to MassDEP which assigned RTN 4-23616 to the release.

Remedial activities completed at the Site during construction included:

- Crushing of concrete and construction debris in the stockpiled material in the former basement area;

BK 11656 PG 317

- Levelling of the stockpiled construction debris within the basement footprint to evenly distribute the material into an approximately one-foot thickness;
- Removal of **approximately 76 tons** of petroleum impacted material encountered during Site construction and back fill activities under Bill of Lading protocol;
- Importing approximately 40,000 cubic yards of pre-characterized and clean dredge material, consisting of glacial-fluvial sediments, to bring the grade to approximately 0ne foot below final design grade;
- The addition of a minimum of one-foot of dense graded aggregate compacted and contoured to design specifications.

### 3.0 Summary of the Risk Characterization

A Method 3 Risk Characterization was prepared in November 2015 by Apex in anticipation of site closure. The results of the risk characterization are the basis for the decision regarding the Permanent Solution with Conditions (PSC) for the release at the Site pursuant to 310 CMR 40.1000. A summary of the Risk Characterization is presented below.

The contaminants of concern and the maximum remaining concentration exceeding applicable Method 1 Risk Characterization criteria, per 310 CMR 40.0975(6) are listed below:

- Total petroleum hydrocarbons – 2,00 mg/kg;
- C11-C22 Aromatic hydrocarbons – 3,500 mg/kg;
- C9-C10 Aromatic hydrocarbons – 1,600 mg/kg;
- C9-C12 Aliphatics hydrocarbons – 1,800 mg/kg;\
- Lead – 2,900 mg/kg (no TCLP exceedance);
- Total Chromium – 300 mg/kg;
- Benzo(a)anthracene – 13 mg/kg;
- Benzo9a)pyrene – 12 mg/kg;
- Benzon(b)flouranthene – 16 mg/kg; and
- Dibenzo(a,h)anthracene 2 mg/kg.

The Property is currently a storage and staging area associated with the nearby marine terminal. Under foreseeable future conditions, receptors reasonably likely to be present on site include workers, security personnel, escorted visitors, trespassers, landscapers, utility workers, and construction workers. The Risk Characterization determined that "No Significant Risk" of harm to human health exists at the Site for each receptor type considered in the risk characterization. It also determined that "No Significant Risk" of harm to safety, public welfare and the environment exists at all portions of the Site. As a result of the risk characterization, an AUL is required to limit Residential use of the property. In addition, due to the presence of elevated concentrations of compounds of concern in soil, the AUL includes requirements for soil management if soil intrusive work is planned below the environmental cap. The disposal site includes the entire property (see Exhibit B of the AUL).

### 4.0 Use of the AUL to Maintain a Level of No Significant Risk

As described in the Risk Characterization, a condition of No Significant Risk to human health, safety, public welfare and the environment currently exists at the Site. However, this conclusion is based on the assumption that the Property will not be used for residential purposes or for the growing of fruits or vegetables for human consumption. This restriction is extended to limit the use of the Property as a school, daycare, nursery, recreational area (such as a park or athletic field) and/or any other use in which a child's presence is likely to be more than incidental. All other reasonably foreseeable site uses were considered. In addition, because residual contamination was documented in soil below the clean fill barrier, this AUL will also provide appropriate notice to future Site users to exercise appropriate caution when handling soil, and ensure that unnecessary exposures do not occur and that contaminated materials are handled appropriately.

### 5.0 Acceptable Activities and Uses

The AUL Opinion provides that a condition of No Significant Risk to health, safety, or public welfare exists for any foreseeable period of time (pursuant to 310 CMR 40.0000) as long as any of the following activities and uses occur on the Property:

(i) Commercial and industrial activities and uses which do not involve the disturbance of soil located greater than 3 feet below the ground surface within the AUL area, as long as the Obligations and Conditions specified herein are followed;

(ii) Any non-residential uses of the Property, including those that are currently conducted, in which a child's presence (other than incidental) is not likely;

(iii) Short-term (6 months or less) underground utility and/or construction activities which are likely to disturb soil, provided that such activities are conducted in accordance with the soil management provisions of the

BK 11656 PG 318

Massachusetts Contingency Plan (MCP) cited at 310 CMR 40.0030 and all applicable worker health and safety practices pursuant to 310 CMR 40.0018;

(iv) Construction or excavation activities are allowed, except as prohibited in Paragraph 6 (ii);

(v) Such other activities or uses which, in the Opinion of a Massachusetts Licensed Site Professional ("LSP"), shall present no greater risk of harm to human health, safety, public welfare or the environment than the activities and uses set forth in this paragraph; and

(vi) Other activities or uses of the Property not identified in Paragraph 6 as Activities and Uses Inconsistent with the AUL.

**6.0 Restricted Activities and Uses**

Activities and uses that are inconsistent with the objectives of this Notice of AUL, and that, if implemented at the Site, may result in a significant risk of harm to human health, safety, or public welfare, are as follows:

(i) Use of the Property as a residence or for growing fruits or vegetables for human consumption, as a school, daycare, nursery, recreational area (such as a park or athletic field), and/or any other use in which a child's presence (other than incidental) is likely;

(ii) Any long-term (greater than 6 months) activity at the Property that is reasonably likely to result in the excavation greater than 3 feet below grade, relocation or removal of the contaminated soil, unless such activity is first evaluated by an LSP who renders an Opinion stating that such activity is consistent with maintaining a condition of No Significant Risk and that such activity is conducted in accordance with Obligations (i) and (ii), set forth below; and

(iii) Any excavation activity which may disturb the soil located at a depth greater than 3 feet below ground surface within the AUL area, without prior development and implementation of a Soil Management Plan and a Health and Safety Plan in accordance with Obligations (i) and (ii) of this Notice.

**7.0 Obligations for the AUL Area**

If applicable, obligations and/or conditions to be undertaken and/or maintained at the Site to maintain a condition of No Significant Risk, as set forth in the AUL Opinion, shall include the following:

1. Any long-term (greater than 6 months) activity at or use of the Property that is reasonably likely to result in the excavation, relocation, or removal of the contaminated soil requires preparation and implementation of a Health and Safety Plan under the guidance of an LSP. At a minimum, the Health and Safety Plan must inform underground utility workers and other workers who may come into contact with soil in the AUL area of (1) the nature and hazards of the contaminants identified in the soil, (2) potential exposure routes, (3) measures to prevent exposure, (4) protective clothing requirements, and (5) any other health and safety measures appropriate for the activity or use;

2. Any long-term (greater than 6 months) activity at or use of the Property that is reasonably likely to result in the excavation, relocation, or removal of the contaminated soil requires preparation and implementation of a written Soil Management Plan under the guidance of an LSP. At a minimum, the Soil Management Plan must (1) describe the soil excavation and stockpile storage methods that will be used to prevent accidental exposure to the excavated soil, including indirect exposure via surface water runoff or fugitive dust emissions, (2) contain procedures to limit access to the excavated soil and the excavation area by Property workers not covered by the Health and Safety Plan, children, Property abutters, or accidental trespassers, (3) contain procedures for characterizing, transporting and recycling/disposing excavated soil, and (4) provide for the restoration of the excavated area as soon as practicable; and

3. Any soil removed from the Property, other than the clean overburden and backfill, must be characterized and disposed of in accordance with federal, state and local regulations, including the MCP 310 CMR 40.0000.

**8.0 Summary and Conclusions**

This LSP Opinion has been prepared for implementation of a Notice of AUL for a release at the 45 Cove Street property in New Bedford, Bristol County, Massachusetts. A Method 3 Risk Characterization indicates that restrictions on activities and uses of this Property are required to maintain a condition of No Significant Risk to human health, safety or public welfare. In general, use of the Property for residential purposes, growing fruits or vegetables for human consumption, or any other use in which a child 's presence (other than incidental) is likely, are to be limited as set forth in Section 6.0. In addition, activities and uses that may result in the excavation, relocation, or removal of contaminated soil at the Property may be permitted with certain precautions.

EXHIBIT D

**AFFIDAVIT OF AUTHORITY**

Now comes Renee Fernandes, the Treasurer of the City of New Bedford, who upon oath hereby deposes and states:

1. The City of New Bedford, a municipal corporation existing under the laws of the Commonwealth of Massachusetts, with an address of 133 William Street, New Bedford, Bristol County, Massachusetts, is the record owner of certain real property shown as New Bedford Assessor's Map 21, Lot 45, formerly known and numbered as 45 Cove Street, New Bedford, Bristol County, Massachusetts (the "Property") pursuant to a judgment of the Land Court dated June 12, 2007 and recorded in the Bristol County (S.D.) Registry of Deeds in Book 8689, Page 93.

2. Pursuant to Section 2-102 of the Code of Ordinances of the City of New Bedford, I, as the Treasurer, am the custodian of all property acquired through the tax title process and therefore the person authorized to execute any and all documents regarding the property, including but not limited to an Activity and Use Limitation.

Signed under the pains and penalties of perjury this 11th day of April, 2016

Renee Fernandes
Treasurer, City of New Bedford

***COMMONWEALTH OF MASSACHUSETTS***

BRISTOL, ss April 11, 2016

On this 11th day of April, before me, the undersigned Notary Public, personally appeared the above-named Renee Fernandes proved to me by satisfactory evidence of identification, being (check whichever applies): ☐ driver's license or other state or federal governmental document bearing a photographic image, ☐ oath or affirmation of a credible witness known to me who knows the above signatory, or ☐ my own personal knowledge of the identity of the signatory, to be the person who signed the preceding document in my presence, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of her knowledge and belief, as the duly authorized treasurer of the City of New Bedford.

Print Name of Notary Public: Blair S. Bailey

My Commission Expires: 02/29/2019

BLAIR S. BAILEY
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
February 29, 2019

**CP BRODEUR, INC.**

**RTN: 4-23643**

SITEC
ENVIRONMENTAL
Civil and Environmental Engineering, Land Use
Planning, Hazardous and Solid Waste Consulting

SITEC ENVIRONMENTAL, Inc.
769 Plain Street, Unit C
Marshfield, MA 02050
Tel. (781) 319-0100 FAX (781) 834-4783

449 Faunce Corner Road
Dartmouth, MA 02747
Tel. (508) 998-2125 FAX (508) 998-7554

February 17, 2012

Massachusetts Department of Environmental Protection
Southeast Regional Office
Bureau of Waste Site Cleanup
20 Riverside Drive
Lakeville, MA 02347

**RE: Notice of an Activity and Use Limitation**
**Release Tracking Nos.: 4-23643**
**CP Brodeur Inc.**
**80 Wright Street**
**New Bedford, Massachusetts**

To Whom It May Concern:

A Class A-3 Response Action Outcome was filed by SITEC Environmental, Inc. on February 10, 2012 concerning the above referenced disposal site. In accordance with 310 CMR 40.1074(4), please find attached the following items:

- Certified Registry copies of the Notice of the Activity and Use Limitation bearing book and page numbers; and
- Registry copies of the referenced Survey Plans Bering book and page numbers.

For SITEC Environmental, Inc.

Geoffrey Souza, LSP
Environmental Assessment Manager

*Attachments*
Attachment 1 - Certified Registry copy of the Notice of an Activity and Use Limitation
Attachment 2 -Certified Registry copies of the referenced Survey Plans
Attachment 3 - PRP Authorization

# ATTACHMENT 1

## REGISTRY COPY OF THE CONFIRMATORY NOTICE OF AN ACTIVITY AND USE LIMITATION

BK 10291 PG 102
02/09/12 10:32 DOC. 3200
Bristol Co. S.D.

**Form 1075**

NOTICE OF ACTIVITY AND USE LIMITATION
M.G.L. c. 21E, § 6 and 310 CMR 40.0000

Disposal Site Name: CP Brodeur, Inc
DEP Release Tracking No.: 4-23643

This Notice of Activity and Use Limitation ("Notice") is made as of this 9 day of February, 2012, by CP Brodeur, Inc., a Massachusetts corporation whose address is 80 Wright Street, New Bedford, Massachusetts, together with their successors and assigns (collectively "Owner").

WITNESSETH:

WHEREAS, CP Brodeur, Inc. is the owner in fee simple of that certain parcel of land located in New Bedford, Bristol County, Massachusetts with the buildings and improvements thereon pursuant to a deed recorded with the Bristol County Registry of Deeds in Book 1744 Page 996;

WHEREAS, said parcel of land, which is more particularly bounded and described in Exhibit A, attached hereto and made apart hereof ("Property") is subject to this Notice of Activity and Use Limitation. The Property is shown on a plan recorded in the Bristol County Registry of Deeds in Plan Book 99, Plan 12;

WHEREAS, a portion of the Property ("Portion of the Property") is subject to this Notice of Activity and Use Limitation. The Portion of the Property is more particularly bounded and described in Exhibit A-1, attached hereto and made a part hereof. The Portion of the Property is shown as "ACTIVITY AND USE LIMITATION AREA" on a plan recorded in the Bristol County Registry of Deeds in Plan Book 168, Plan 84.

WHEREAS, the Portion of the Property comprises all a disposal site as the result of a release of oil and/or hazardous material. Exhibit B is a sketch plan showing the relationship of the Portion of the Property subject to this Notice of Activity and Use Limitation to the boundaries of said disposal site existing within the limits of the Property and to the extent such boundaries have been established. Exhibit B is attached hereto and made a part hereof; and

WHEREAS, one or more response actions have been selected for the Disposal Site in accordance with M.G.L. c. 21E ("Chapter 21E") and the Massachusetts Contingency Plan, 310 CMR 40.0000 ("MCP"). Said response actions are based upon (a) the restriction of human access to and contact with oil and/or hazardous material in soil and (b) the restriction of certain activities occurring in, on, through, over or under the Portion of the Property. The basis for such restrictions is set forth in an Activity and Use Limitation Opinion ("AUL Opinion"), dated January 13, 2012 (which is attached hereto as Exhibit C and made apart hereof);

NOW, THEREFORE, notice is hereby given that the activity and use limitations set forth in said AUL Opinion are as follows:

1. Activities and Uses Consistent with the AUL Opinion. The AUL Opinion provides that a condition of No Significant Risk to health, safety, public welfare or the environment exists for any foreseeable period of time (pursuant to 310 CMR 40.0000) so long as any of the following activities and uses occur on the Portion of the Property:

(i) Retail, commercial and/or industrial activities and uses, including but not limited to, associated pedestrian and vehicular traffic;

(ii) Excavation associated with underground utility work and/or construction work;

(iii) Activities associated with the routine maintenance of the property; including, but not limited to, mowing, landscaping, vegetation/debris removal, street sweeping, and catch basin cleaning;

(iv) Activities and uses which are not identified by this Notice as being inconsistent with maintaining a condition of No Significant Risk;

(v) Such other activities and uses which, in the Opinion of an LSP, shall present no greater risk of harm to health, safety, public welfare, or the environment than the activities and uses set forth in this paragraph; and

(vi) Such other activities and uses not identified in Paragraph 2 as being Activities and Uses Inconsistent with the AUL.

2. Activities and Uses Inconsistent with the AUL Opinion. Activities and uses which are inconsistent with the objectives of this Notice of Activity and Use Limitation, and which, if implemented at the Portion of the Property, may result in a significant risk of harm to health, safety, public welfare or the environment or in a substantial hazard, are as follows:

(i) Use of the Portion of the Property as a residence, school, playground, daycare facility or other use at which a child's regular presence is likely;

(ii) Use of the Portion of the Property for agriculture including, but not limited to, growing of homegrown produce except in raised planting beds;

(iii) Activities and/or uses that may cause physical or chemical deterioration, breakage, or structural damage to the concrete pavement on the Portion of the Property; and

(iv) Relocation of the contaminated soil from beneath the Portion of the Property unless an LSP renders an Opinion which states that such relocation is consistent with maintaining a condition of No Significant Risk.

3. Obligations and Conditions Set Forth in the AUL Opinion. If applicable, obligations and/or conditions to be undertaken and/or maintained at the Portion of the Property to maintain a condition of No Significant Risk as set forth in the AUL Opinion shall include the following:

(i) The concrete pavement must be maintained within the Portion of the Property to prevent exposures to the underlying contaminated soil;

(ii) A Soil Management Plan must be prepared by an LSP and implemented prior to the commencement of any activity that is likely to disturb the contaminated soil located below the concrete pavement on the Portion of the Property;

(iii) The concrete pavement within the Portion of the Property must be repaired or replaced with a comparable barrier following the completion of any activity that involves its removal and/or disturbance;

4. Proposed Changes in Activities and Uses. Any proposed changes in activities and uses at the Portion of the Property which may result in higher levels of exposure to oil and/or hazardous material than currently exist shall be evaluated by an LSP who shall render an Opinion, in accordance with 310 CMR 40.1080 *et seq.*, as to whether the proposed changes will present a significant risk of harm to health, safety, public welfare or the environment. Any and all requirements set forth in the Opinion to meet the objective of this Notice shall be satisfied before any such activity or use is commenced.

5. Violation of a Response Action Outcome. The activities, uses and/or exposures upon which this Notice is based shall not change at any time to cause a significant risk of harm to health, safety, public welfare, or the environment or to create substantial hazards due to exposure to oil and/or hazardous material without the prior evaluation by an LSP in accordance with 310 CMR 40.1080 *et seq.*, and without additional response actions, if necessary, to achieve or maintain a condition of No Significant Risk or to eliminate substantial hazards.

If the activities, uses, and/or exposures upon which this Notice is based change without the prior evaluation and additional response actions determined to be necessary by an LSP in accordance with 310 CMR 40.1080 *et seq.*, the owner or operator of the Portion of the Property subject to this Notice at the time that the activities, uses and/or exposures change, shall comply with the requirements set forth in 310 CMR 40.0020.

6. Incorporation Into Deeds, Mortgages, Leases, and Instruments of Transfer. This Notice shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer, whereby an interest in and/or a right to use the Property or a portion thereof is conveyed.

Owner hereby authorizes and consents to the filing and recordation and/or registration of this Notice, said Notice to become effective when executed under seal by the undersigned LSP, and recorded and/or registered with the appropriate Registry of Deeds and/or Land Registration Office.

WITNESS the execution hereof under seal this 8th day of February, 2012.

CP Brodeur, Inc.

Cindy Pettway, President and Treasurer

COMMONWEALTH OF MASSACHUSETTS

_____, ss February 8th, 2012

On this 8th day of February, 2012, before me, the undersigned notary public, personally appeared Cindy Pettway, proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he and she signed it voluntarily for its stated purpose.

Notary Public:
My Commission Expires: 2/8/2012
Michael J McGreavy

The undersigned LSP hereby certifies that he executed the aforesaid Activity and Use Limitation Opinion attached hereto as Exhibit C and made a part hereof and that in his Opinion this Notice of Activity and Use Limitation is consistent with the terms set forth in said Activity and Use Limitation Opinion.

Date: 2/9/12

Geoffrey Souza, LSP No. 412[illegible]

[LSP SEAL]

COMMONWEALTH OF MASSACHUSETTS
GEOFFREY [illegible]
REGISTERED
LICENSED SITE PROFESSIONAL

COMMONWEALTH OF MASSACHUSETTS

Massachusetts, Bristol County ss February 9, 2012

On this 9th day of February, 2012, before me, the undersigned notary public, personally appeared Geoffrey Souza, provided to me through satisfactory evidence of identification, which were Drivers License, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.

Amanda Woodard
Notary Public:
My Commission Expires: 10/04/2013

ALEXANDRA M. [illegible] NOTARY PUBLIC COMMONWEALTH OF MASSACHUSETTS

**EXHIBIT A**

(Description of Parcel of Land Containing Area Subject to AUL)

Beginning at a point in the southerly line of Wright Street said point being at the northwesterly corner of Parcel No. 1 Lot G of plan hereinafter described;

Thence south 12° 44' 02" east 244.41 feet;

Thence south 75° 39' 23" west 130.73 feet;

Thence north 11° 43' 32" west 148.07 feet to a point;

Thence north 11° 43' 32" west 68.66 feet to a point in the easterly line of MacArthur Drive;

Thence in an arc whose radius is 32.00 feet for a distance of 49.72 feet to a point in the southerly line of Wright Street;

Thence north 77° 17' 58" east 95.00 feet to the point of beginning, containing 31,451 square feet.

Being Lot G on plan of land entitled "The City of New Bedford, New Bedford Redevelopment Authority, Disposition Map Parcel No. 1 & 3, South Terminal Urban Renewal Project", dated September 14, 1977, Scale 1"=80', prepared by New Bedford Redevelopment Authority, New Bedford, Massachusetts and recorded with the Bristol County Registry of Deeds in Plan Book 99, Plan 12.

**EXHIBIT A-1**

(Description of Area Subject to AUL)

That certain portion of a parcel of land, said parcel of land being situated at 80 Wright Street in New Bedford, Bristol County, Massachusetts, and said portion being shown as "Activity and Use Limitation Area" on a plan entitled, "Plan of Activity and Use Limitation in New Bedford, MA", dated January 12, 2012, Scale 1"=20', prepared by SITEC, Inc., Dartmouth, Massachusetts, and recorded with the Bristol County Registry of Deeds in Plan Book 168, Plan 84, and said portion being more particularly bounded and described as follows:

Starting at a point on the southerly property line of the locus property, S 75° 39' 23" W, 114.23 feet distant from the southeastern-most corner of the locus lot, thence;

Perpendicular from said point on the southerly property line, 90.2 feet to the southeastern-most corner of the activity and use limitation area to be described.

Now beginning at said southeastern-most corner of the activity and use limitation area to be described, thence;

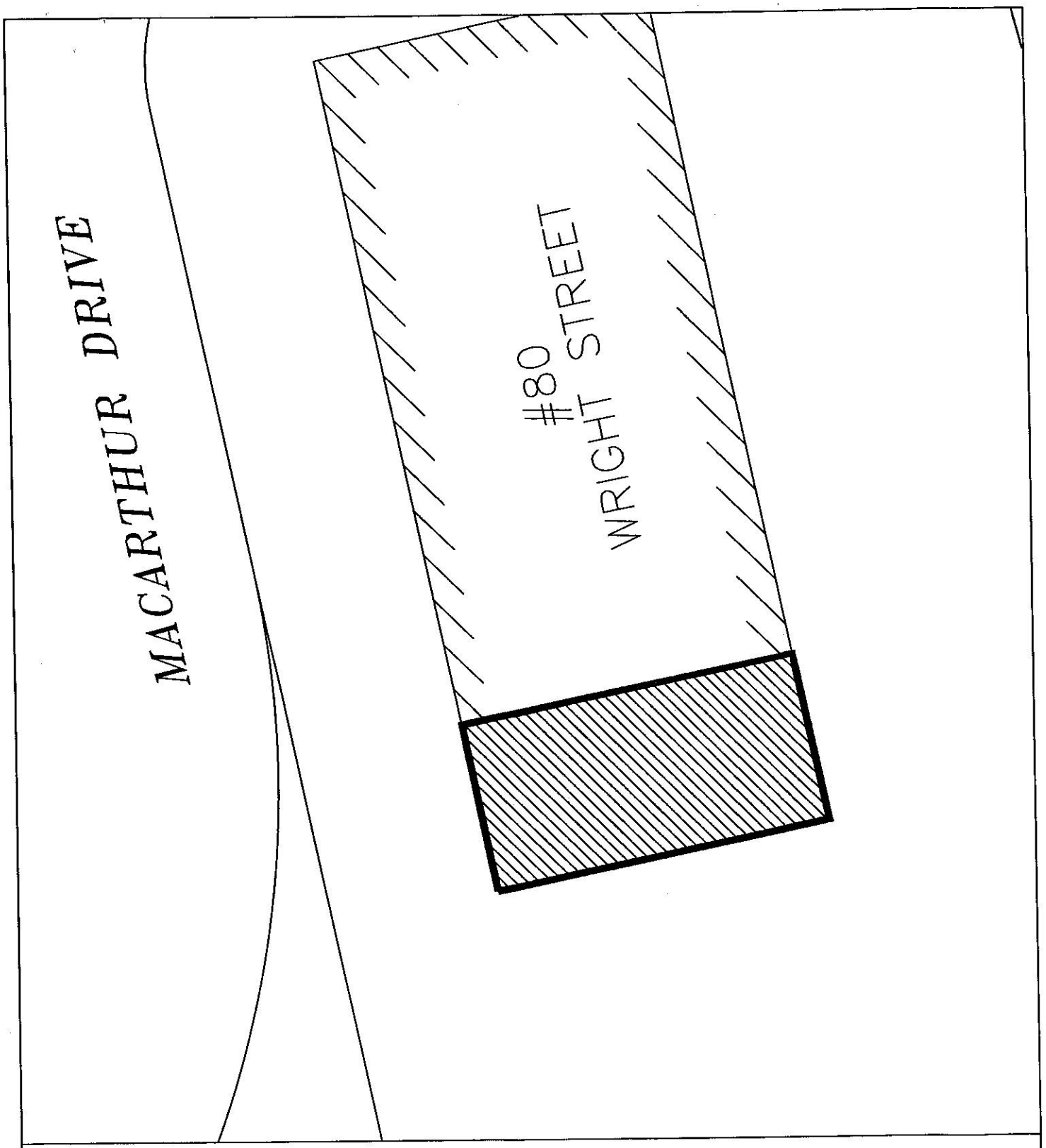
S 78° 19' 07" W, 49.93 feet, thence;

N 11° 35' 58" W, 25.02 feet, thence;

N 78° 19' 07" E 49.93 feet, thence;

S 11° 35' 58" E, 25.02 feet to the point of beginning.

Containing 1,249 square feet, more or less.




LEGEND

BOUNDRY OF AREA SUBJECT TO AUL

AREA OF THE DISPOSAL SITE (TO THE EXTENT DEFINED)

EXHIBIT B

scale: 1"=20'

0 10 20

SKETCH PLAN OF AREA SUBJECT TO AUL IN RELATION TO BOUNDRIES OF DISPOSAL SITE

SITEC ENVIRONMENTAL
769 Plain Street, Unit C
Marshfield, MA 02050
Tel. (781) 319-0100 FAX (781) 834-4783

SITEC
ENVIRONMENTAL
Civil and Environmental Engineering, Land Use
Planning, Hazardous and Solid Waste Consulting

SITEC ENVIRONMENTAL, Inc.
769 Plain Street, Unit C
Marshfield, MA 02050
Tel. (781) 319-0100 FAX (781) 834-4783

449 Faunce Corner Road
Dartmouth, MA 02747
Tel. (508) 998-2125 FAX (508) 998-7554

BK 10291 PG 109
EXHIBIT C

January 13, 2012

CP Brodeur, Inc.
80 Wright Street
New Bedford, MA 02745

**RE: Activity and Use Limitation (AUL) Opinion**
**80 Wright Street**
**New Bedford, Massachusetts**

Dear Mrs. Pettway:

This Activity and Use Limitation (AUL) Opinion was prepared pursuant to 310 CMR 40.1074(1)(b) for a parcel of land located at 80 Wright Street, New Bedford, Bristol County, Massachusetts, and as identified as City of New Bedford Tax Assessor's Map 31, Lot 264 with the buildings and improvements thereon (the "Property").

Site History

21E investigations conducted at the Property identified elevated levels of petroleum hydrocarbons in soil and groundwater under the addition to the south of the building (the "Site"). The elevated levels of petroleum hydrocarbons are likely attributable to a leaking oil water separator located in the center of the Site. The Massachusetts Department of Environmental Protection (MassDEP) was notified of the release and a Release Abatement Measure (RAM) was completed to repair the soil water separator and stabilize the release. Site investigations were completed to define the nature and extent of the contamination and characterize the risk to human health and the environment.

BK 10291 PG 110

Reason for Activity and Use Limitation

A Method 3 Risk Assessment was prepared to support the Response Action Outcome (RAO) for this Site. The Site is covered with an concrete barrier and contaminated soil is located greater than 3 feet below the ground surface eliminating routine direct contact with the sub-surface contaminated soil by full time workers, visitors, and trespassers; however, if this concrete barrier is removed this exposure pathway may become available and a level of "No Significant Risk" may not be maintained. The AUL requires the maintenance of the barrier to eliminate this exposure pathway. In addition, to inhibit increased risk of harm to human health, the AUL prohibits the use of the AUL area as a residence or other use where the routine high frequency and high intensity presence of a child is likely (i.e. daycare facility). Gardening will also be prohibited in the AUL area, which may cause a condition of "Significant Risk" if produce is grown in the contaminated soil.

Permitted Uses and Activities

(i) Retail, commercial and/or industrial activities and uses, including but not limited to, associated pedestrian and vehicular traffic;

(ii) Excavation associated with underground utility work and/or construction work;

(iii) Activities associated with the routine maintenance of the property; including, but not limited to, mowing, landscaping, vegetation/debris removal, street sweeping, and catch basin cleaning;

(iv) Activities and uses which are not identified by this Notice as being inconsistent with maintaining a condition of No Significant Risk;

(v) Such other activities and uses which, in the Opinion of an LSP, shall present no greater risk of harm to health, safety, public welfare, or the environment than the activities and uses set forth in this paragraph; and

(iv) Such other activities and uses not identified below as being Restricted Activities and Uses.

Restricted Uses and Activities

(i) Use of the Site as a residence, school, playground, daycare facility or other use at which a child's regular presence is likely;

(ii) Use of the Site for agriculture including, but not limited to, growing of homegrown produce except in raised planting beds;

BK 10291 PG 111

(iii) Activities and/or uses that may cause physical or chemical deterioration, breakage, or structural damage to the concrete pavement on the Site; and

(iv) Relocation of the contaminated soil from beneath the Site unless an LSP renders an Opinion which states that such relocation is consistent with maintaining a condition of No Significant Risk.

Obligations and Conditions

(i) The concrete pavement must be maintained within the Site to prevent exposures to the underlying contaminated soil;

(ii) A Soil Management Plan must be prepared by an LSP and implemented prior to the commencement of any activity that is likely to disturb the contaminated soil located below the concrete pavement on the Site;

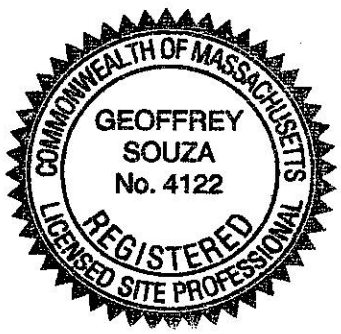
(iii) The concrete pavement within the Site must be repaired or replaced with a comparable barrier following the completion of any activity that involves its removal and/or disturbance;

It is the opinion of SITEC Environmental, Inc. that implementation of the AUL insures that the residual contamination is unlikely to pose any significant risk to the public health or to present a condition of further environmental concern. Consequently, compliance with the requirements of the AUL also presents a regulatory closure which is unlikely to pose a future liability relative to MGL Chapter 21E and 310 CMR 40.0000 (MCP).

The AUL Opinion expressed herein has been developed based on the review of historical data, site reconnaissance, field observations and measurements, and site-specific analytical results. SITEC Environmental, Inc. makes no claims or representations (implicit or implied) as to the completeness or accuracy of information or data developed by others. Based on available information, research and site observations documented to date, the LSP Opinion forms a sound basis for effecting regulatory closure of this project via a Class A-3 RAO with an AUL, as defined.

For SITEC ENVIRONMENTAL, INC.

Geoffrey Souza, LSP
Licensed Site Professional #4122



# ATTACHMENT 2

**CERTIFIED REGISTRY COPIES OF THE REFERENCED SURVEY PLANS**

61-66

99-12

PARCEL NO. 4

PARCEL NO. 2

SOUTH (60.00' Wide) ST.

N 77°-17'-58" E → 850.10'

R=22.00' L=34.18' Δ=89°-01'-30"

R=22.00' L=33.89' Δ=88°-15'-53"

DRIVE

N11°-43'-32"W → 327.72'

(60.00' Wide)

PARCEL NO. 3
341,961 SQ. FT.

262.76' S 14°-26'-09"E

ST.

HASSEY

N 14°-26'-09"W (60.00' Wide) →

R=95.00' L=152.10' Δ=91°-44'-07"

R=32.00' L=50.81' Δ=90°-58'-30"

780.67'

← S 77°-17'-58"W (60.00' Wide)

WRIGHT ST.

95.00' N77°-17'-58"E → 687.79'

547.99'

R=155.00' L=248.17' Δ=91°-44'-07"

L=216.78' Δ=80°-08'-03"

139.80'

N 77°-17'-58" E → 460.20'

PARCEL NO. 1
LOT "A"
0.826 Acres

N 77°-17'-58" E → 300.14' 20' Easement

120.00'

PARCEL NO. 1
LOT "B"
0.826 Acres

N 77°-17'-58" E → 300.14'

120.00'

PARCEL NO. 1 LOT "C"
0.827 Acres

88.73'

L=31.39' Δ=11°-36'-04"

N 77°-17'-58" E → 300.30'

← L=20.60' 20' Easement

308.77'

120.00'

PARCEL NO. 1
LOT "D"
48,639.67 SQ.FT.

138.51'

1,651.16' → S 14°-26'-09" E

Combined Pierhead and Bulkhead line

PARCEL NO. 10

MAC ARTHUR

N11°-43'-32"W →

68.66'

R=32.00' L=49.72' Δ=89°01'-30"

PARCEL NO. 1
LOT "G"
31,451 SQ. FT.

244.41' N12°-42'-02"W →

PARCEL NO. 1
129,630 SQ. FT.

N12°-42'-02" W → 228.70'

10.00' N12°-42'-02"W →

PARCEL NO. 1
LOT "F"
128,058 SQ. FT.

201.39'

5.00'

N227,880.56
E759,955.86

148.07' N11°-43'-32"W → 148.07'

R=155.00' L=236.40 Δ=87°22'-55"

130.73

548.23'

← S 75°-39'-23"W

606.34'

1438.37'

PARCEL NO. 1
LOT "E"
4,630 SQ. FT.

Registry use only.

REC'D & RECORDED

SEP 21 11 51 AM '77

REGISTRY OF DEEDS
BRISTOL COUNTY
SOUTHERN DISTRICT

I CERTIFY THAT I HAVE CONFORMED WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS IN PREPARING THIS PLAN.

Manuel J. Viveiros 9/15/77

COMMONWEALTH OF MASSACHUSETTS
MANUEL J. VIVEIROS
REGISTERED
REGISTERED LAND SURVEYOR

9-19-77
Richard Walega
City Planner

80' 40' 0 40' 80'

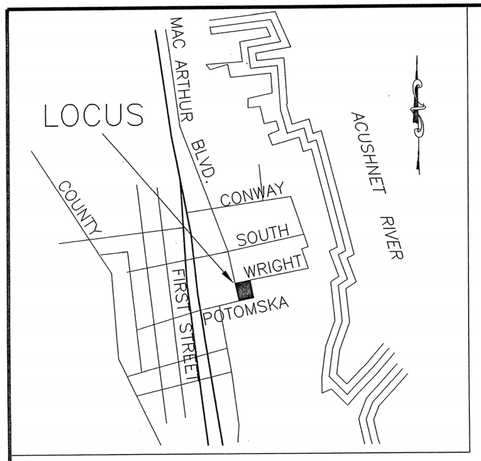
SCALE: 1"= 80'

THE CITY OF NEW BEDFORD
NEW BEDFORD REDEVELOPMENT AUTHORITY

DISPOSITION MAP
PARCEL NO. 1 & 3
SOUTH TERMINAL URBAN RENEWAL PROJECT
PREPARED BY
NEW BEDFORD REDEVELOPMENT AUTHORITY
NEW BEDFORD
MASS.
DATE: SEPT. 14, 1977

99-12

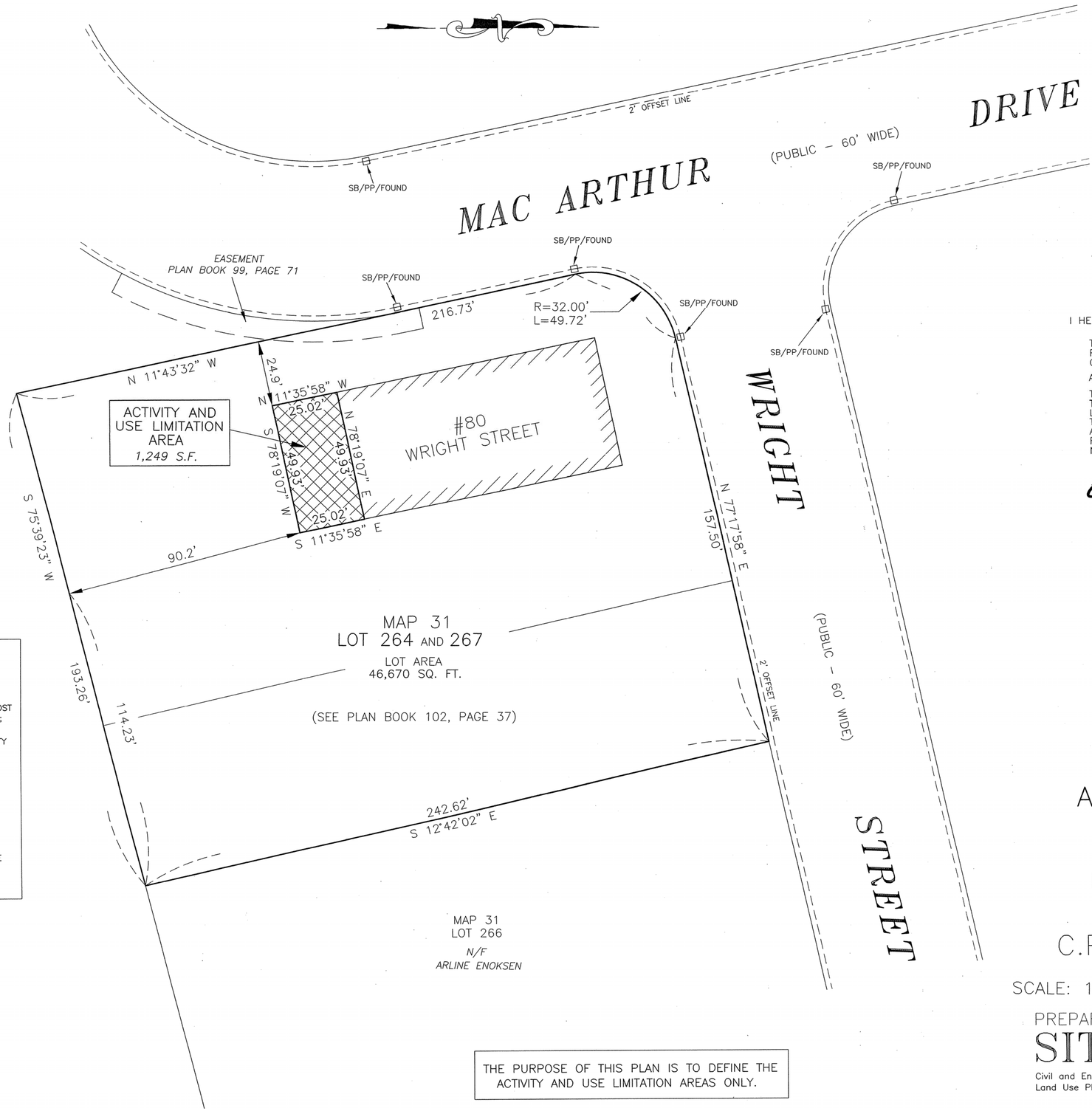
99-12




LOCUS MAP

01/29/12 09:57
PLAN RECORDED
BRISTOL S.D.
REGISTRY
in 168-84

FOR REGISTRY USE ONLY




PLAT 31
LOT 234, 240 & 261
*N/F*
*HALL COMUNICATIONS INC.*
*PLAN BOOK 147, PAGE 9*

**ACTIVITY AND USE LIMITATION AREA**
**LEGAL DESCRIPTION**

ACTIVITY AND USE LIMITATION AREA IN NEW BEDFORD, MA,:

STARTING AT A POINT WHICH IS 90.2 FEET PERPENDICULAR FROM THE SOUTHERLY PROPERTY LINE, SAID POINT BEING THE SOUTHEASTERN-MOST CORNER OF THE ACTIVITY AND USE LIMITATION AREA TO BE DESCRIBED;

NOW BEGINNING AT SAID SOUTHEASTERN-MOST CORNER OF THE ACTIVITY AND USE LIMITATION AREA TO BE DESCIBED;

THENCE, S 78°19'07" W, 49.93 FEET;

THENCE, N 11°35'58" W, 25.02 FEET;

THENCE, N 78°19'07" E, 49.93 FEET;

THENCE, S 11°35'58" E, 25.02 FEET TO THE POINT OF BEGINNING.

CONTAINING 1,249 SQUARE FEET, MORE OR LESS.

MEANING TO DESCRIBE THE SOUTHERNMOST TWENTY-FIVE FEET OF THE BUILDING AT 80 WRIGHT STREET.

I HEREBY CERTIFY THAT;

THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS;

AND

THE PROPERTY LINES SHOWN ON THIS PLAN ARE THE LINES DIVIDING EXISTING OWNERSHIPS, AND THE LINES OF THE STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND THAT NO NEW LINES FOR DIVISION OF EXISTING OWNERSHIPS OR FOR NEW WAYS ARE SHOWN.

PROFESSIONAL LAND SURVEYOR — DATE 1/12/2012

THE PURPOSE OF THIS PLAN IS TO DEFINE THE ACTIVITY AND USE LIMITATION AREAS ONLY.

0' 20' 40' 60'

# PLAN OF ACTIVITY AND USE LIMITATION IN NEW BEDFORD, MA

PREPARED FOR

## C.P. BRODEUR INC.

SCALE: 1"=20' JANUARY 12, 2012

PREPARED BY
SITEC
Civil and Environmental Engineering
Land Use Planning
449 Faunce Corner Road
Dartmouth, MA 02747
(508) 998-2125
FAX (508) 998-7554

168-84

168-84

# ATTACHMENT 3

**PRP AUTHORIZATION**

# C.P. BRODEUR, INC.

80 WRIGHT STREET
NEW BEDFORD, MA 02740
508-993-0334 PHONE
508-990-3671 FAX

October 31, 2011

Massachusetts Department of Environmental Protection

20 Riverside Drive

Lakeville, MA 02347

**RE: C.P. Brodour**

**80 Wright Street**

**New Bedford, Massachusetts**

**Release Tracking No.: 4-23643**

To Whom It May Concern:

In accordance 310 CMR 40.0009(2), I am authorizing SITEC Environmental, Inc. to act as my agent in electronically filing any required Massachusetts Contingency Plan documents for the above referenced release.

Sincerely,

Cindy Pettway

# EXHIBIT D
# BORING LOGS AND TEST PITS

Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

# BORING NUMBER CEC-1-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 11/09/2023 **DATE COMPLETED** 11/09/2023
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623886 **LONGITUDE** -70.918409
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING 11/09/2023 7.5 ft / Elev 2.5 ft
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
AT END OF CORING N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
24 HRS AFTER DRILLING N/A

| DEPTH (ft) | REMARKS | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) |
|---|---|---|---|---|---|---|---|---|
| 0 | Analytical Samples submitted from 0'-4' and 8'-9.5' bgs. | 0.2 ft 3" Asphalt | 9.8 | | | | | |
| | | Tan to Gray, Silty Sand, Trace Gravel, Medium Dense, SM, **(FILL)** | | SS S-1 | 100 | 9-10-12-8 (22) | | 0.1 |
| | | 2.0 ft Black to Brown, Slightly Organic Silty Sand, Trace Gravel, Coal, Dry, Medium Dense, Slightly Organic Odor, SM, **(FILL)** | 8.0 | SS S-2 | 75 | 4-5-8-9 (13) | | 1.4 |
| 5 | | 4.0 ft Brown, Silty Sand with Gravel, Dry, Medium Dense, SM, **(FILL)** | 6.0 | SS S-3 | 50 | 7-8-4-6 (12) | | 0.6 |
| | | 6.0 ft Black, Slightly Organic Silt with Sand and Gravel, Trace Wood, Damp, Medium Stiff, | 4.0 | SS S-4 | 12 | 5-3-4-2 (7) | | 0.7 |
| | | 7.5 ft Slightly Organic Odor, ML, **(FILL)** | 2.5 | | | | | 0.6 |
| | | 8.0 ft Gray, Silty Sand, Few Cinders, Wet, Loose, SM, **(FILL)** | 2.0 | SS S-5 | 88 | WOH-WOH-2-2 (2) | | 0.3 |
| | | 9.5 ft Brown, Fibrous PEAT, Damp, Soft, PT, Organic Content 42.4%, **(Organics)** | 0.5 | | | | | 0.2 |
| 10 | | Gray, Silty Sand with Gravel, Trace Roots/ Wood, Wet, Very Loose to Medium Dense, | 0 | SS S-6 | 80 | 3-7-17-17 (24) | | 0.9 |
| | | 11.0 ft SM, **(OUTWASH)** | -1.0 | | | | | |
| | | Brown, Silty Sand with Gravel, Wet, Medium Dense to Very Dense, SM, **(TILL)** | | SS S-7 | 75 | 13-34-30-50 (64) | | 0.8 |
| | Split spoon refusal at 14' bgs. | 14.0 ft End of boring at 14.0 feet | -4.0 | | | | | |
| 15 | | | | | | | | |
| 20 | | | -10 | | | | | |
| 25 | | | | | | | | |
| 30 | | | -20 | | | | | |

▲ SPT N VALUE ▲ 20 40 60 80
PL MC LL 20 40 60 80
□ FINES CONTENT (%) □ 20 40 60 80

Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

# BORING NUMBER CEC-2-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 11/09/2023 **DATE COMPLETED** 11/09/2023
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623973 **LONGITUDE** -70.917976
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING 11/09/2023 12.0 ft / Elev -1.0 ft
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
AT END OF CORING N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
24 HRS AFTER DRILLING N/A

| DEPTH (ft) | ELEVATION (ft) | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) |
|---|---|---|---|---|---|---|---|---|
| 0 | 11 | Analytical samples submitted from 0'-4' and 8.8'-10' bgs. | Tan, Silty Sand with Gravel, Dry, Loose, SM, **(FILL)** | SS S-1 | 75 | 3-3-6-6 (9) | | 0.1 |
| 2.0 ft | 9.0 | | Light Brown, Silty Sand, Moist, Medium Dense, SM, **(FILL)** | SS S-2 | 100 | 4-5-10-12 (15) | | 0.2 |
| 5 | 6 | | Dark Brown, SLIGHTLY ORGANIC SILTY SAND WITH GRAVEL, Trace Brick, Roots, Moist, Medium Dense, SM, Organic Content 2.1%, **(FILL)** | SS S-3 | 100 | 8-13-11-12 (24) | | 0.3 |
| 8.0 ft | 3.0 | | Tan, Silty Sand, Trace Gravel, Dry, Very Loose, SM, **(FILL)** | SS S-4 | 90 | 10-11-8-9 (19) | | 0.3 |
| 8.8 ft | 2.2 | | Dark Brown, Organic Silt with Sand, Trace Roots, Dry, Soft, OL, **(ORGANICS)** | SS S-5 | 65 | 2-1-1-2 (2) | | 0.3 |
| 10.0 ft | 1.0 | | Black, Organic Sand with Silt, Moist, Very Soft, OL, Organic Content 9.7%, **(ORGANICS)** | SS S-6 | 100 | -- | | 0.1 |
| 10 | 1 | | | | | | | |
| 12.0 ft ▽ | -1.0 | | Dark Brown, Slightly Organic Silty Sand, Trace Roots, Moist, Loose, SM, **(ORGANICS)** | SS S-7 | 100 | -- | | 0.6 |
| 14.0 ft | -3.0 | | | | | | | |
| 15.0 ft | -4.0 | | Brown, Silty Sand, Wet, Medium Dense, SM, **(OUTWASH)** | SS S-8 | 70 | 11-11-17-21 (28) | | 0.6 |
| 15 | | | | | | | | |
| 17.0 ft | -6.0 | | Gray, Silty Sand with Gravel, Wet, Dense, SM, **(OUTWASH)** | SS S-9 | 95 | 10-15-21-18 (36) | | 0.5 |
| 19.0 ft | -8.0 | | Brown, Silty Sand, Wet, Medium Dense, SM, **(OUTWASH)** | SS S-10 | 60 | 12-14-12-15 (26) | | 0.2 |
| 20 | -9 | | | | | | | |
| 21.0 ft | -10.0 | | Gray, Silty Sand with Gravel, Wet, Dense, GM, **(TILL)** | SS S-11 | 40 | 11-15-21-22 (36) | | 0.3 |
| 25.0 ft | -14.0 | Split Spoon Refusal at 25.5' bgs | | SS S-12 | 25 | 6-16-24-21 (40) | | 0.2 |
| 25 | | | | | | | | |
| 25.5 ft | -14.5 | | No Recovery | SS S-13 | 0 | 45 (45) | | |
| | | | End of boring at 25.5 feet | | | | | |
| 30 | -19 | | | | | | | |

▲ SPT N VALUE ▲ 20 40 60 80
PL MC LL 20 40 60 80
□ FINES CONTENT (%) □ 20 40 60 80

Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

# BORING NUMBER CEC-3-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 11/10/2023 **DATE COMPLETED** 11/10/2023
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623423 **LONGITUDE** -70.917839
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING 11/10/2023 8.0 ft / Elev 3.0 ft
AT END OF CORING N/A
24 HRS AFTER DRILLING N/A
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
**NOTES** Property 1 (54 Wright St. New Bedford, MA)

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) |
|---|---|---|---|---|---|---|---|---|---|
| 0 | | Analytical Sample submitted from 0'-4' bgs. | Dark Brown, Silty Sand, Trace Roots, Dry, Medium Dense, SM, **(FILL)** | 11 | SS S-1 | 38 | 2-14-9-5 (23) | | 0.3 |
| 2.0 ft | | | Brown, SILTY SAND, Dry, Loose, SM, **(FILL)** | 9.0 | SS S-2 | 65 | 3-2-2-3 (4) | | 0.2 |
| 4.0 ft | | | Tan to Brown, Silty Sand, Dry, Loose, SM, **(FILL)** | 7.0 | SS S-3 | 95 | 2-2-3-3 (5) | | 0.2 |
| 5.5 ft | | | Brown to Black, Silty Sand with Gravel, Trace Brick, Trace Roots, Dry to Moist, Medium Dense, SM, **(FILL)** | 5.5 | SS S-4 | 50 | 6-6-4-4 (10) | | 0.8 |
| 8.0 ft ▽ | | 3" spoon driven after 2" spoon to obtain additional soil recovery. | Brown, Silty Gravel with Sand, Wet, Medium Dense, GM, **(OUTWASH)** | 3.0 | SS S-5 | 25 | 5-6-5-4 (11) | | 0.2 |
| 10.0 ft | | | Tan to Gray, Silty Sand with Gravel, Wet, Very Dense to Medium Dense, SM, **(TILL)** | 1.0 | SS S-6 | 65 | 10-30-35-28 (65) | | 0.2 |
| 10 | | Split spoon refusal at 13' bgs | | 1 | SS S-7 | 50 | 22-50 | | 0.5 |
| 15 | | | | | SS S-8 | 55 | 11-14-14-17 (28) | | 0.3 |
| 16.0 ft | | Split spoon refusal at 16.5' bgs | | -5.0 | | | | | |
| 16.5 ft | | | No Recovery | -5.5 | SS S-9 | -- | 50 | | 0.5 |
| | | | End of boring at 16.5 feet | | | | | | |
| 20 | | | | -9 | | | | | |
| 25 | | | | | | | | | |
| 30 | | | | -19 | | | | | |

▲ SPT N VALUE ▲
20 40 60 80
PL MC LL
20 40 60 80
□ FINES CONTENT (%) □
20 40 60 80

Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

# BORING NUMBER CEC-4-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 11/09/2023 **DATE COMPLETED** 11/09/2023
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623573 **LONGITUDE** -70.918352
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING 11/09/2023 8.0 ft / Elev 3.0 ft
AT END OF CORING N/A
24 HRS AFTER DRILLING N/A
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
**NOTES** Property 1 (54 Wright St. New Bedford, MA)

| DEPTH (ft) | ELEVATION (ft) | MATERIAL DESCRIPTION | REMARKS | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) |
|---|---|---|---|---|---|---|---|---|
| 0 | 11 | 0.5 ft / 10.5: Tan, Poorly-Graded Sand with Silt and Gravel, Trace Roots, Dry, Medium Dense, SP-SM, **(FILL)** | Analytical samples submitted from 0'-4' and 8'-10' bgs. | SS S-1 | 95 | 5-6-6-5 (12) | | 10.0 |
| | | Brown, Silty Sand, Trace Gravel, Dry, Medium Dense to Dense, SM, **(FILL)** | | SS S-2 | 80 | 9-11-14-11 (25) | | 0.2 |
| | | 4.5 ft / 6.5: Light Brown, Well-Graded Sand with Silt and Gravel, Dry, Dense, SW-SM, **(FILL)** | | SS S-3 | 90 | 6-17-32-21 (49) | | 0.3 |
| 5 | | 6.5 ft / 4.5: Dark Brown, Slightly Organic Silt with Sand and Gravel, Trace Bricks, Damp, Stiff, Slightly Organic Odor, ML, **(FILL)** | | SS S-4 | 95 | 13-3-9-9 (12) | | 0.3 |
| | | 8.0 ft ▽ / 3.0: Brown, Slightly Organic Silty Sand with Gravel, Trace Roots, Wet, Very Loose, SM, **(Organics)** | | SS S-5 | 60 | 1-WOH-WOH-WOH (1) | | 1.7 |
| 10 | 1 | 10.0 ft / 1.0: Brown, SILTY SAND, FEW GRAVEL, Trace Roots, Wet, Very Loose, SM, **(OUTWASH)** | | SS S-6 | 50 | WOH-WOH-2-13 (2) | | 0.1 |
| | | 12.0 ft / -1.0: Light Brown, Well-Graded Sand with Silt and Gravel, Wet, Medium Dense, SW-SM, **(OUTWASH)** | | SS S-7 | 75 | 13-15-11-17 (26) | | 0.3 |
| | | 14.0 ft / -3.0: Brown, Silty Sand with Gravel, Wet, Dense to Very Dense, SM, **(TILL)** | | SS S-8 | 70 | 12-15-17-10 (32) | | 0.2 |
| 15 | | | | SS S-9 | 100 | 12-22-28-30 (50) | | 0.3 |
| | | 18.0 ft / -7.0: No Recovery | | SS S-10 | -- | 11-24-20-50 (44) | | |
| 20 | -9 | 20.0 ft / -9.0: End of boring at 20.0 feet | Sample S-11 was abandoned in the boring after snapping off of drill rods. | | | | | |
| 25 | | | | | | | | |
| 30 | -19 | | | | | | | |

▲ SPT N VALUE ▲ 20 40 60 80
PL MC LL 20 40 60 80
□ FINES CONTENT (%) □ 20 40 60 80

Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

# BORING NUMBER CEC-5-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 11/10/2023 **DATE COMPLETED** 11/10/2023
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623647 **LONGITUDE** -70.918060
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING 11/10/2023 8.0 ft / Elev 3.0 ft
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
AT END OF CORING N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
24 HRS AFTER DRILLING N/A

| DEPTH (ft) | REMARKS | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) |
|---|---|---|---|---|---|---|---|---|
| 0 | Analytical Samples submitted from 0'-4' and 8'-10' bgs. | 0.2 ft 3" Asphalt | 10.8 | | | | | |
| | | Tan, Poorly-Graded Sand with Silt, Dry, Medium Dense, SP-SM, **(FILL)** | | SS S-1 | 95 | 17-9-10-3 (19) | | 0.1 |
| | | 2.0 ft Light Brown, Silty Sand with Gravel, Dry, Medium Dense, SM, **(FILL)** | 9.0 | | | | | |
| | | | | SS S-2 | 90 | 8-14-11-8 (25) | | 0.1 |
| 5 | | | | SS S-3 | 85 | 6-10-16-16 (26) | | 0.3 |
| | | 5.5 ft Gray To Black, Silty Sand with Gravel, Trace Wood/Brick, Moist, Medium Dense, SM, **(FILL)** | 5.5 | | | | | |
| | | | | SS S-4 | 50 | 9-10-6-4 (16) | | 0.5 |
| | | 8.0 ft ▽ | 3.0 | | | | | |
| | | Dark Brown, Slightly Organic SILTY SAND, FEW GRAVEL, Wet, Loose, SM, Organic Content 1.9%, **(ORGANICS)** | | SS S-5 | 80 | 3-2-2-2 (4) | | 0.3 |
| 10 | | 10.0 ft Brown, Silty Sand with Gravel, Wet, Medium Dense, SM, **(TILL)** | 1.0 | | | | | |
| | | | | SS S-6 | 90 | 10-14-14-18 (28) | | 0.2 |
| | | 12.0 ft Brown, Poorly-Graded Sand with Silt and Gravel, Wet, Very Dense, SP-SM, **(TILL)** | -1.0 | | | | | |
| | Split spoon refusal at 13.5' bgs. | 13.5 ft End of boring at 13.5 feet | -2.5 | SS S-7 | 75 | 12-22-50 (72) | | 0.1 |
| 15 | | | | | | | | |
| 20 | | | -9 | | | | | |
| 25 | | | | | | | | |
| 30 | | | -19 | | | | | |

▲ SPT N VALUE ▲
20 40 60 80
PL MC LL
20 40 60 80
□ FINES CONTENT (%) □
20 40 60 80

Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

# BORING NUMBER CEC-1-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/05/2023 **DATE COMPLETED** 12/05/2023
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623895 **LONGITUDE** -70.917636
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING 12/05/2023 4.0 ft / Elev 7.0 ft
AT END OF CORING N/A
24 HRS AFTER DRILLING N/A
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
**NOTES** Property 1 (18 Wright St. New Bedford, MA)

| DEPTH (ft) | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 0 | | 11 | | | | | | |
| 0.5 ft | Brown, Silty Sand with Gravel, Trace Roots, Dry, Medium Dense, SM, **(FILL)** | 10.5 | SS S-1 | 95 | 3-7-8-9 (15) | | 0.2 | Analytical Sample submitted from 0'-4' bgs. |
| 2.0 ft | Tan, Silty Sand with Gravel, Dry, Medium Dense, SM, **(FILL)** | 9.0 | | | | | | |
| | Brown, Silty Sand with Gravel, Moist, Medium Dense, Slight Petroleum Odor, SM, **(FILL)** | | SS S-2 | 75 | 14-11-5-3 (16) | | 0.6 | |
| 4.5 ft | | 6.5 | | | | | | |
| 5 | Dark Brown, Slightly Organic SILTY SAND WITH GRAVEL, Trace Roots/Wood, Trace Brick, Debris, Moist, Medium Dense, SM, Organic Content 4.5%, **(FILL)** | | SS S-3 | 90 | 3-4-6-28 (10) | | 1.0 | |
| 6.0 ft | | 5.0 | | | | | | |
| | Brown, Silty Sand with Gravel, Few Bricks, Wet, Dense, SM, **(FILL)** | | SS S-4 | 55 | 25-15-16-10 (31) | | 0.0 | |
| 8.0 ft | | 3.0 | | | | | | |
| | Red to Brown, Poorly-Graded Gravel/Brick Debris, Few Sand, Wet, Loose, Petroleum Odor, GP, **(FILL)** | | SS S-5 | 20 | 7-4-4-4 (8) | | 0.0 | No recovery, with 2" spoon, recovered 5" with 3" spoon. |
| 10 | | 1 | | | | | | |
| 10.0 ft | Brown, Slightly Organic POORLY-GRADED SAND WITH SILT AND GRAVEL, Trace Brick, Roots, Wet, Medium Dense, Slight Organic / Petroleum Odor, SP-SM, **(FILL)** | | SS S-6 | 65 | 2-5-15-15 (20) | | 0.2 | |
| 12.0 ft | | -1.0 | | | | | | |
| 13.0 ft | Dark Brown, Slightly Organic Silty Sand with Gravel, Trace Brick, Roots, Wet, Medium Dense, Slight Organic / Petroleum Odor, SM, **(FILL)** | -2.0 | SS S-7 | 90 | 7-5-10-11 (15) | | 0.2 | |
| 15 | Gray, Silty Sand with Gravel, Wet, Medium Dense to Very Dense, SM, **(TILL)** | | SS S-8 | 75 | 34-30-25-38 (55) | | 0.2 | |
| | | | SS S-9 | 100 | 21-23-35-34 (58) | | 0.3 | |
| 18.0 ft | | -7.0 | | | | | | |
| | End of boring at 18.0 feet | | | | | | | |
| 20 | | -9 | | | | | | |
| 25 | | | | | | | | |
| 30 | | -19 | | | | | | |

▲ SPT N VALUE ▲ 20 40 60 80
PL MC LL 20 40 60 80
□ FINES CONTENT (%) □ 20 40 60 80

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31 Bellows Road
Raynham, MA 02767

# BORING NUMBER CEC-2-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/06/2023 **DATE COMPLETED** 12/06/2023
**GROUND ELEVATION** 8.70 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624047 **LONGITUDE** -70.917329
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING 12/06/2023 6.0 ft / Elev 2.7 ft
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
AT END OF CORING N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
24 HRS AFTER DRILLING N/A

| DEPTH (ft) | REMARKS | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) |
|---|---|---|---|---|---|---|---|---|
| 0 | Analytical Sample submitted from 0'-4' bgs. | 0.2 ft 3" Asphalt<br>Tan to Brown, Silty Sand with Gravel, Dry, Dense, SM, **(FILL)** | 8.4 | SS S-1 | 60 | 11-13-22-17 (35) | | 0.3 |
| | | 2.2 ft<br>Brown to Black, Poorly-Graded Gravel / Asphalt with Sand and Silt, Dry, Dense, GP, **(FILL)** | 6.4 | SS S-2 | 750 | 27-26-13-10 (39) | | 1.2 |
| 5 | | 3.8 ft<br>4.0 ft<br>Tan, Silty Sand with Gravel, Dry, Dense, SM, **(FILL)** | 5.0<br>4.7 | SS S-3 | 70 | 10-8-8-7 (16) | | 1.0 |
| | | 6.0 ft<br>Dark Gray, POORLY-GRADED SAND WITH SILT AND GRAVEL, Few Debris / Roots, Dry, Medium Dense, SP-SM, **(FILL)** | 2.7 | SS S-4 | 65 | 7-8-6-6 (14) | | 0.1 |
| | | 8.0 ft<br>Gray, Poorly-Graded Sand with Silt, Trace Shells, Wet, Medium Dense, SP-SM, **(FILL)** | 0.7 | SS S-5 | 45 | 3-2-2-4 (4) | | 1.3 |
| 10 | | 10.0 ft<br>Gray, POORLY-GRADED SAND WITH SILT, Trace Shells, Wet, Loose, Slight Petroleum Odor, SP-SM, **(FILL)** | -1.3 | SS S-6 | 70 | 5-5-14-16 (19) | | 1.9 |
| | | 11.0 ft<br>Black to Gray, Silty Sand with Gravel, Trace Shells, Wet, Medium Dense, Petroleum Odor, SM, **(FILL)** | -2.3 | SS S-7 | 75 | 16-12-11-13 (23) | | 0.2 |
| | | 12.5 ft<br>Gray, Silty Gravel with Sand, Trace Shells, Wet, Medium Dense, GM, **(OUTWASH)** | -3.8 | SS S-8 | 40 | 9-9-13-12 (22) | | 0.0 |
| 15 | | 14.0 ft<br>Grayish Brown, Silty Sand with Gravel, Wet, Medium Dense, SM, **(OUTWASH)** | -5.3 | SS S-9 | 55 | 7-12-12-11 (24) | | 0.2 |
| | | 16.0 ft<br>Tan, Poorly-Graded Sand with Silt, Wet, Medium Dense, SP-SM, **(OUTWASH)** | -7.3 | SS S-10 | 45 | 6-5-4-6 (9) | | 0.4 |
| | Black, Slightly Organic Sand Seam at 18' bgs. | 18.0 ft<br>Tan, Well-Graded Sand with Silt, Wet, Medium Dense, SW-SM, **(OUTWASH)** | -9.3 | SS S-11 | 60 | 2-4-6-20 (10) | | 0.8 |
| 20 | | 20.0 ft<br>Orange, Silty Sand with Gravel, Wet, Loose, SM, **(OUTWASH)** | -11.3 | SS S-12 | 60 | 12-36-17-50 (53) | | 0.2 |
| | | 22.0 ft<br>Orange / Brown, Well-Graded Sand with Silt, Wet, Medium Dense, SW-SM, **(OUTWASH)** | -13.3 | SS S-13 | 45 | 11-12-17-17 (29) | | 0.5 |
| 25 | | 26.0 ft<br>Orange / Brown, Silty Gravel with Sand, Wet, Medium Dense to Very Dense, GM, **(TILL)** | -17.3 | | | | | |
| | | End of boring at 26.0 feet | | | | | | |
| 30 | | | -21 | | | | | |

▲ SPT N VALUE ▲ 20 40 60 80
PL MC LL 20 40 60 80
□ FINES CONTENT (%) □ 20 40 60 80

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Raynham, MA 02767

# BORING NUMBER CEC-3-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/06/2023 **DATE COMPLETED** 12/06/2023
**GROUND ELEVATION** 9.60 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624116 **LONGITUDE** -70.916931
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING 12/06/2023 8.0 ft / Elev 1.6 ft
AT END OF CORING N/A
24 HRS AFTER DRILLING N/A
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
**NOTES** Property 1 (18 Wright St. New Bedford, MA)

| DEPTH (ft) | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 0 | 0.2 ft 3" Asphalt | 9.4 | | | | | | Analytical Sample submitted from 0.3'-4' bgs. |
| | Tan, Silty Sand, Dry, Medium Dense, SM, **(FILL)** | | SS S-1 | 55 | 4-6-11-12 (17) | | 0.0 | |
| | 2.2 ft Brown, SILTY SAND, FEW GRAVEL, Dry, Medium Dense, SM, **(FILL)** | 7.4 | SS S-2 | 50 | 5-8-6-6 (14) | | 1.0 | |
| 5 | 4.2 ft Brown to Dark Brown, Silty Sand with Gravel, Dry, Medium Dense to Dense, SM, **(FILL)** | 5.4 | SS S-3 | 50 | 7-5-6-22 (11) | | 0.0 | |
| | | | SS S-4 | 50 | 25-24-24-17 (48) | | 0.3 | |
| | 8.0 ft ▽ Brown to Gray, Poorly-Graded Sand with Silt, Trace Shells, Wet, Medium Dense to Loose, SP-SM, **(OUTWASH)** | 1.6 | SS S-5 | 55 | 4-6-5-4 (11) | | 0.2 | |
| 10 | | 0 | SS S-6 | 55 | 3-4-4-4 (8) | | 0.9 | |
| | 12.0 ft Gray, Slightly Organic SILTY SAND, FEW GRAVEL, Trace Shells, Wet, Loose, Slight Organic Odor, SM, Organic Content 1.1%, **(OUTWASH)** | -2.4 | SS S-7 | 75 | 5-3-5-9 (8) | | 1.2 | |
| | 14.0 ft Brown, Poorly-Graded Sand with Silt and Gravel, Wet, Medium Dense, SP-SM, **(OUTWASH)** | -4.4 | SS S-8 | 60 | 5-7-8-7 (15) | | 0.2 | |
| 15 | | | SS S-9 | 75 | 7-10-9-7 (19) | | 0.3 | |
| | 18.0 ft End of boring at 18.0 feet | -8.4 | | | | | | |
| 20 | | -10 | | | | | | |
| 25 | | -20 | | | | | | |
| 30 | | | | | | | | |

▲ SPT N VALUE ▲ 20 40 60 80
PL MC LL 20 40 60 80
□ FINES CONTENT (%) □ 20 40 60 80

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Raynham, MA 02767

# BORING NUMBER CEC-4-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/05/2023 **DATE COMPLETED** 12/05/2023
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623463 **LONGITUDE** -70.917509
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING N/A; AT END OF CORING N/A; 24 HRS AFTER DRILLING N/A
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
**NOTES** Property 1 (18 Wright St. New Bedford, MA)

| DEPTH (ft) | ELEVATION (ft) | MATERIAL DESCRIPTION | REMARKS | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) |
|---|---|---|---|---|---|---|---|---|
| 0 | 11 | 0.5 ft – 10.5: Dark Brown, Organic Silty Sand, Few Roots, Dry, Loose, SM, **(FILL)** | Analytical Samples submitted from 0'-4' and 4'-5.75' bgs. | SS S-1 | 60 | 1-3-3-3 (6) | | 0.2 |
| | | 2.0 ft – 9.0: Tan, Silty Sand with Gravel, Trace Glass, Dry, Loose, SM, **(FILL)** | | SS S-2 | 80 | 3-2-2-2 (4) | | 0.1 |
| | | 4.0 ft – 7.0: Brown, SILTY SAND, FEW GRAVEL, Dry, Loose, SM, **(FILL)** | | SS S-3 | 74 | 2-5-7-45/0.3' (12) | | 0.3 |
| 5 | | 5.8 ft – 5.2: Light Brown, Silty Sand, Dry, Medium Dense, SM, **(FILL)** | Split spoon refusal at 5.75' bgs; Augers grinding 5.75-6'. Auger and split spoon refusal at 6.5'. | SS S-4 | 0 | 50-WOH/0.2' (50) | | -- |
| | | 6.5 ft – 4.5: No Recovery | | | | | | |
| 10 | 1 | End of boring at 6.5 feet | | | | | | |
| 15 | | | | | | | | |
| 20 | -9 | | | | | | | |
| 25 | | | | | | | | |
| 30 | -19 | | | | | | | |

▲ SPT N VALUE ▲ 20 40 60 80
PL MC LL 20 40 60 80
□ FINES CONTENT (%) □ 20 40 60 80

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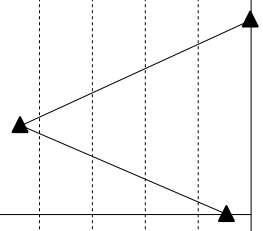
# BORING NUMBER CEC-5-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/05/2023 **DATE COMPLETED** 12/05/2023
**GROUND ELEVATION** 8.80 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623533 **LONGITUDE** -70.916969
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING N/A
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
AT END OF CORING N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
24 HRS AFTER DRILLING N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) |
|---|---|---|---|---|---|---|---|---|---|
| 0 | | Split spoon and auger refusal at 1.25' bgs, offset 6' north. | Brown, Silty Sand with Gravel / Concrete, Trace Roots, Dry, Very Dense, SM, **(FILL)** | | SS S-1 | 56 | 3-24-50/0.2' | | |
| | | | 2.0 ft / 6.8 | | | | | | |
| | | | Tan to Brown, Silty Sand with Gravel, Dry to Moist, Medium Dense to Very Dense, SM, **(FILL)** | | SS S-2 | 70 | 5-6-7-9 (13) | | |
| 5 | | Split spoon refusal at 5.5' bgs | | | SS S-3 | 55 | 5-10-81 (91) | | |
| | | | 5.5 ft / 3.3 | | | | | | |
| | | | End of boring at 5.5 feet | | | | | | |
| 10 | | Analytical Sample submitted from 0'-4' bgs. | | -1 | | | | | |
| 15 | | | | | | | | | |
| 20 | | | | -11 | | | | | |
| 25 | | | | | | | | | |
| 30 | | | | -21 | | | | | |

▲ SPT N VALUE ▲
20 40 60 80
PL MC LL
20 40 60 80
□ FINES CONTENT (%) □
20 40 60 80



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# BORING NUMBER CEC-6-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/06/2023 **DATE COMPLETED** 12/06/2023
**GROUND ELEVATION** 9.10 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623677 **LONGITUDE** -70.916698
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING N/A; AT END OF CORING N/A; 24 HRS AFTER DRILLING N/A
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
**NOTES** Property 1 (18 Wright St. New Bedford, MA)

| DEPTH (ft) | REMARKS | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) |
|---|---|---|---|---|---|---|---|---|
| 0 | Analytical Sample submitted from 0'-4' bgs. | 0.5 ft: Dark Brown, Organic Silty Sand, Few Roots, Dry, Medium Dense, SM, **(FILL)** (8.6) | 9.1 | SS S-1 | 65 | 2-5-5-8 (10) | | |
| | | Brown, Silty Sand with Gravel, Trace Debris, Roots, Dry, Medium Dense, SM, **(FILL)** | | SS S-2 | 70 | 7-8-9-7 (17) | | |
| 5 | | 5.0 ft: Black, Silty Sand with Gravel, Some Concrete/Brick/Wood, Dry to Moist, Medium Dense, SM, **(FILL)** (4.1) | 4.1 | SS S-3 | 90 | 7-8-14-11 (22) | | |
| | Split spoon refusal at 7.75' bgs | 6.0 ft: Dark Gray, POORLY-GRADED SAND WITH SILT AND GRAVEL, Some Concrete/Brick/ Wood, Moist, Medium Dense, SP-SM, **(FILL)** (3.1) | 3.1 | SS S-4 | 74 | 11-10-16-50 /0.3' (26) | | |
| | | 7.8 ft: End of boring at 7.8 feet (1.4) | 1.4 | | | | | |
| 10 | | | 0 | | | | | |
| 15 | | | -10 | | | | | |
| 20 | | | -20 | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |

▲ SPT N VALUE ▲ 20 40 60 80
PL MC LL 20 40 60 80
□ FINES CONTENT (%) □ 20 40 60 80

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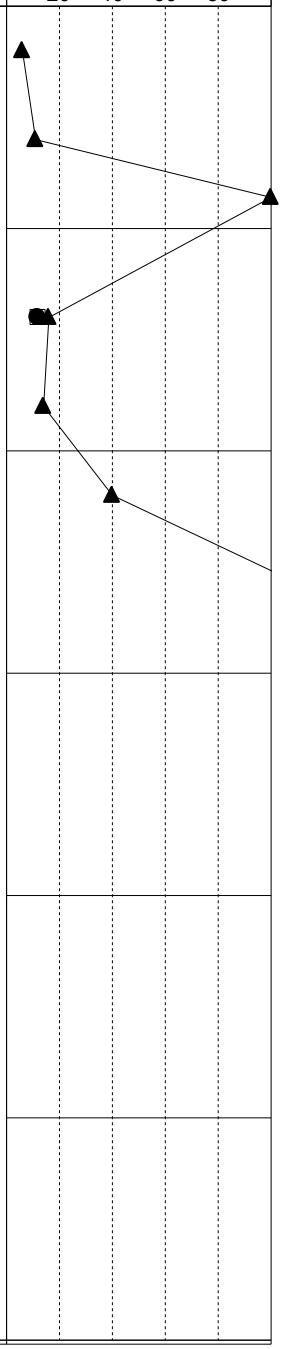
# BORING NUMBER CEC-7-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/05/2023 **DATE COMPLETED** 12/05/2023
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623464 **LONGITUDE** -70.917548
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING 12/05/2023 8.0 ft / Elev 3.0 ft
AT END OF CORING N/A
24 HRS AFTER DRILLING N/A
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
**NOTES** Property 1 (18 Wright St. New Bedford, MA)

| DEPTH (ft) | REMARKS | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) |
|---|---|---|---|---|---|---|---|---|
| 0 | Analytical Samples submitted from 0'-4', 4'-8', and 8'-10' bgs. | 0.5 ft: Brown, Silty Sand with Gravel, Trace Roots, Dry, Loose, SM, **(FILL)** | 10.5 | | | | | |
| | | Tan, Silty Sand, Dry, Loose, SM, **(FILL)** | | SS S-1 | 88 | 2-2-4-6 (6) | | 0.1 |
| | | 2.0 ft: Brown, Silty Sand with Gravel, Dry, Medium Dense to Very Dense, SM, **(FILL)** | 9.0 | SS S-2 | 20 | 4-6-5-4 (11) | | 0.7 |
| 5 | Split spoon refusal at 4.6'. Augers grinding from 4.6-6' bgs through possible boulder or concrete. | | | SS S-3 | 100 | 4-50/0.1' | | 0.1 |
| | | 6.0 ft: Brown, POORLY-GRADED SAND WITH SILT AND GRAVEL, Trace Debris, Moist to Wet, Medium Dense, SP-SM, **(FILL)** | 5.0 | SS S-4 | 45 | 4-5-11-15 (16) | | |
| | | 8.0 ft: Dark Brown, Silty Sand with Gravel, Trace Debris, Wet, Medium Dense, SM, **(FILL)** | 3.0 | SS S-5 | 50 | 4-6-8-16 (14) | | 0.0 |
| 10 | | 10.0 ft: Brown/Gray, Silty Sand with Gravel, Wet, Dense to Very Dense, SM, **(TILL)** | 1.0 | SS S-6 | 55 | 5-14-26-53 (40) | | 0.1 |
| | | | | | | | | 0.7 |
| | Split spoon and auger refusal at 13.8' bgs. | | | SS S-7 | 87 | 14-47-55 (102) | | 0.5 |
| | | 13.8 ft: End of boring at 13.8 feet | -2.8 | | | | | |
| 15 | | | | | | | | |
| 20 | | | -9 | | | | | |
| 25 | | | | | | | | |
| 30 | | | -19 | | | | | |



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# BORING NUMBER CEC-8-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/05/2023 **DATE COMPLETED** 12/05/2023
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623469 **LONGITUDE** -70.917443
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING 12/05/2023 8.0 ft / Elev 3.0 ft
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
AT END OF CORING N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
24 HRS AFTER DRILLING N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) |
|---|---|---|---|---|---|---|---|---|---|
| 0 | | Analytical Samples submitted from 2'-4' and 4'-8' bgs. | 1.0 ft: Dark Brown, Organic Silty Sand with Gravel, Few Roots, Dry, Loose, SM, **(FILL)** | 11 | | | | | |
| | | | 2.0 ft: Tan, Silty Sand, Dry, Loose, SM, **(FILL)** | 10.0 | SS S-1 | 60 | 1-1-3-7 (4) | | 0.1 |
| | | | Brown, Poorly-Graded Sand with Silt and Gravel, Trace Debris, Dry, Medium Dense, SP-SM, **(FILL)** | 9.0 | SS S-2 | 70 | 5-5-5-4 (10) | | 0.1 |
| 5 | | | 4.0 ft: Brown, SILTY SAND WITH GRAVEL, Dry, Loose, Petroleum Odor at 5', SM, **(FILL)** | 7.0 | SS S-3 | 50 | 4-4-4-28 (8) | | 0.8 |
| | | Split spoon and auger refusal at 8' bgs on possible concrete slab. | 6.0 ft: Dark Brown, Silty Sand with Gravel, Trace Shells/Brick/Asphalt/Glass, Wet, Medium Dense, SM, **(FILL)** | 5.0 | SS S-4 | 50 | 9-8-7-25 (15) | | 0.9 |
| | | | 8.0 ft: End of boring at 8.0 feet | 3.0 | | | | | |
| 10 | | | | 1 | | | | | |
| 15 | | | | | | | | | |
| 20 | | | | -9 | | | | | |
| 25 | | | | | | | | | |
| 30 | | | | -19 | | | | | |

▲ SPT N VALUE ▲ 20 40 60 80
PL MC LL 20 40 60 80
□ FINES CONTENT (%) □ 20 40 60 80

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# BORING NUMBER A0



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/01/2024 **DATE COMPLETED** 05/01/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623433 **LONGITUDE** -70.917462
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1' and 1'-2' bgs. | Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.0 ft / 9.0<br>Tan, Silty Sand, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 3.5 ft / 6.5<br>3.8 ft / 6.2<br>Asphalt<br>Brown to Tan, Silty Sand, Dry, SM, **(FILL)** | | | |
| 5 | | | 5.0 ft / 5.0<br>Brown, Poorly-Graded Sand with Silt and Gravel, Few Shell Fragments, Dry, SP-SM, **(FILL)** | DP S-2 | 100 | |
| | | | 6.5 ft / 3.5<br>End of boring at 6.5 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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Raynham, MA 02767

# BORING NUMBER A-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/01/2024 **DATE COMPLETED** 05/01/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623500 **LONGITUDE** -70.917482
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted as composite and from 0'-1', 1'-2' & 4'-5' bgs. | Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.0 ft / 10.0<br>Tan, Silty Sand, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 3.5 ft / 7.5<br>3.8 ft / 7.2<br>Asphalt<br>Brown, Poorly-Graded Sand with Silt and Gravel, Few Shell Fragments, Dry, SP-SM, **(FILL)** | | | |
| 5 | | | | DP S-2 | 100 | |
| | | | 6.5 ft / 4.5<br>End of boring at 6.5 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER A-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/20/2024 **DATE COMPLETED** 06/20/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623567 **LONGITUDE** -70.917503
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | | Tan, Silty Sand, Trace Gravel, Little Roots, Dry, SM, **(FILL)** | | | |
| | | Analytical samples submitted from 0'-1', 1'-2', 2'-3' & 3'-4' bgs. | 2.0 ft — 9.0 | | | |
| | | | Tan, Poorly-Graded Sand with Gravel, Trace Silt, Dry, SP, **(FILL)** | DP S-1 | 100 | |
| | | | 4.5 ft — 6.5 | | | |
| 5 | | Brick Fragments at 5.5' bgs. | Brown, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-2 | 100 | |
| | | | 7.0 ft — 4.0 | | | |
| | | | End of boring at 7.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER A-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/01/2024 **DATE COMPLETED** 05/01/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623634 **LONGITUDE** -70.917524
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | | Brown, Silty Sand, Little Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.0 ft — 10.0 | | | |
| | | Analytical samples submitted as composite and from 1'-2', 2'-3' & 4'-5' bgs. | Brown, Poorly-Graded Sand with Silt and Gravel, Trace Shell Fragments, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | | DP S-2 | 100 | |
| | | | 6.3 ft — 4.7 | | | |
| | | | End of boring at 6.3 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER A-4



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/29/2023 **DATE COMPLETED** 12/29/2023
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623700 **LONGITUDE** -70.917544
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1', 1'-2', 2'-3', & 3'-4' bgs. | Brown, Silty Sand, Trace Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| 4.0 ft / 7.0 | | | Brown, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-2 | 100 | |
| 8.0 ft / 3.0 | | | End of boring at 8.0 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER A-5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/01/2024 **DATE COMPLETED** 05/01/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623767 **LONGITUDE** -70.917565
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted as composite and from 1'-2', 2'-3', & 4'-5' bgs. | Brown, Silty Sand with Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.0 ft / 10.0 | | | |
| | | | Brown, Poorly-Graded Sand with Silt and Gravel, Trace Shell Fragments, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | | DP S-2 | 100 | |
| | | | 6.3 ft / 4.7 | | | |
| | | | End of boring at 6.3 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER A-6



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/01/2024 **DATE COMPLETED** 05/01/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623834 **LONGITUDE** -70.917585
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** 4.0 ft / Elev 7.0 ft
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 1'-2' & 4'-5' bgs. | Brown, Silty Sand with Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.0 ft — 10.0 | | | |
| | | | Tan, Silty Sand with Gravel, Dry to Wet, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 4.0 ft ▽ — 7.0 | | | |
| 5 | | | Brown, Poorly-Graded Sand with Silt and Gravel, Moist, SP-SM, **(FILL)** | | | |
| | | | 5.5 ft — 5.5 | DP S-2 | 100 | |
| | | | End of boring at 5.5 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER A-7



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/01/2024 **DATE COMPLETED** 05/01/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623900 **LONGITUDE** -70.917605
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted as composite from 1'-4' bgs. Rock fragment at 2.5' bgs. | 0.5 ft Brown, Silty Sand with Roots, Dry, SM, **(TOPSOIL)** 10.5<br>Tan, Silty Sand with Gravel, Dry to Moist, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 4.0 ft 7.0<br>4.5 ft Brown, Poorly-Graded Sand with Silt and Gravel, Trace Shell Fragments, Dry, SP-SM, **(FILL)** 6.5<br>End of boring at 4.5 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER AA0



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/30/2024 **DATE COMPLETED** 04/30/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623418 **LONGITUDE** -70.917551
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1', 1'-2' & 4'-5' bgs. | Brown, Silty Sand with Gravel, Few Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.0 ft 9.0 | | | |
| | | | Tan, Silty Sand, Dry, SM, **(FILL)** | | | |
| | | | 2.0 ft 8.0 | | | |
| | | | Brown, Poorly-Graded Sand with Silt and Gravel, Trace Shell Fragments, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | | DP S-2 | 100 | |
| | | | 6.0 ft 4.0 | | | |
| | | | End of boring at 6.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER AA-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/30/2024 **DATE COMPLETED** 04/30/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623485 **LONGITUDE** -70.917572
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1', 1'-2', 2'-3', & 4'-5' bgs. | Brown to Tan, Silty Sand with Gravel, Trace Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.5 ft / 9.5 — Brown, Poorly-Graded Sand with Silt and Gravel, Trace Shell Fragments, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 6.0 ft / 5.0 | DP S-2 | 100 | |
| | | | End of boring at 6.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER AA-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/30/2024 **DATE COMPLETED** 04/30/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623551 **LONGITUDE** -70.917592
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 1'-2' & 4'-5' bgs. | Brown to Tan, Silty Sand, Trace Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.0 ft — 10.0 | | | |
| | | | Tan, Silty Sand, Dry, SM, **(FILL)** | | | |
| | | | 2.5 ft — 8.5 | DP S-1 | 100 | |
| | | | Tan to Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** | | | |
| 5 | | | 5.5 ft — 5.5 | DP S-2 | 100 | |
| | | | End of boring at 5.5 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

Civil & Environmental Consultants, Inc.
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# BORING NUMBER AA-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/20/2024 **DATE COMPLETED** 06/20/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623618 **LONGITUDE** -70.917613
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1', 1'-2', 2'-3', & 3'-4' bgs. | Brown to Tan, Silty Sand, Trace Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.0 ft — 10.0 | | | |
| | | | Tan, Silty Sand, Dry, SM, **(FILL)** | | | |
| | | | 2.5 ft — 8.5 | DP S-1 | 100 | |
| | | | Tan to Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** | | | |
| 5 | | | 5.5 ft — 5.5 | DP S-2 | 100 | |
| | | | End of boring at 5.5 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER AA-4



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/30/2024 **DATE COMPLETED** 04/30/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623685 **LONGITUDE** -70.917633
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 1'-2', 2'-3', & 4'-5' bgs. | 0.8 ft Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** 10.2 | | | |
| | | | Tan to Brown, Silty Sand, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 3.0 ft Brown, Silty Sand with Gravel, Trace Shell Fragments, Dry, SM, **(FILL)** 8.0 | | | |
| 5 | | | 6.5 ft 4.5 | DP S-2 | 100 | |
| | | | End of boring at 6.5 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER AA-5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/30/2024 **DATE COMPLETED** 04/30/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623752 **LONGITUDE** -70.917654
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 1'-2' & 4'-5' bgs. | 0.8 ft — Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** — 10.2<br>Tan, Silty Sand, Dry, SM, **(FILL)**<br>2.8 ft — 8.2<br>Brown to Tan, Poorly-Graded Sand with Silt and Gravel, Trace Shell Fragments, Dry, SP-SM, **(FILL)**<br>6.5 ft — 4.5<br>End of boring at 6.5 feet | DP S-1<br>DP S-2 | 100<br>100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

Civil & Environmental Consultants, Inc.
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# BORING NUMBER AA-6



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/30/2024 **DATE COMPLETED** 04/30/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623819 **LONGITUDE** -70.917674
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 1'-2' & 4'-5' bgs. | Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.0 ft — 10.0 | | | |
| | | | Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 3.2 ft — 7.8 | | | |
| 5 | | | Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** | DP S-2 | 100 | |
| | | | 6.3 ft — 4.7 | | | |
| | | | End of boring at 6.3 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER AA-8.5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/30/2024 **DATE COMPLETED** 04/30/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623986 **LONGITUDE** -70.917726
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted as composite. | 0.5 ft Asphalt<br>Brown, Silty Sand with Gravel, Dry, SM, **(FILL)** 10.5<br>3.0 ft Tan to Brown, Poorly-Graded Sand with Silt and Gravel, Dry to Moist, SP-SM, **(FILL)** 8.0<br>5.0 ft 6.0<br>End of boring at 5.0 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B0



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/01/2024 **DATE COMPLETED** 05/01/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623449 **LONGITUDE** -70.917373
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1', 1'-2', 2'-3, & 3'-4' bgs. | 0.8 ft Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** 9.2<br>Tan, Silty Sand, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 4.5 ft 5.5<br>End of boring at 4.5 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/01/2024 **DATE COMPLETED** 05/01/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623515 **LONGITUDE** -70.917393
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1', 1'-2', & 4'-5' bgs. | 0.5 ft Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** 10.5<br>Tan, Silty Sand, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 3.8 ft 7.2<br>Brown, Poorly-Graded Sand with Silt and Gravel, Few Shell Fragments, Dry, SP-SM, **(FILL)** 6.2<br>4.8 ft<br>End of boring at 4.8 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/01/2024 **DATE COMPLETED** 05/01/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623582 **LONGITUDE** -70.917414
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 1'-2', 2'-3', & 4'-5' bgs. | 0.5 ft Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** 10.5<br>Tan, Silty Sand, Dry, SM, **(FILL)**<br>3.2 ft 7.8<br>3.8 ft Asphalt 7.2<br>Brown, Poorly-Graded Sand with Silt and Gravel, Few Shell Fragments, Dry, SP-SM, **(FILL)**<br>5.0 ft 6.0<br>End of boring at 5.0 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/20/2024 **DATE COMPLETED** 06/20/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623649 **LONGITUDE** -70.917434
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1', 1'-2', & 2'-3' bgs. | Tan, Poorly-Graded Sand with Silt, Trace Roots, SP-SM **(FILL)** | | | |
| | | | 1.5 ft 9.5 | | | |
| | | | Tan, Poorly-Graded Sand with Silt and Gravel, SP-SM **(FILL)** | DP S-1 | 100 | |
| | | | 3.5 ft 7.5 | | | |
| 5 | | | Brown, Poorly-Graded Sand with Silt and Gravel, SP-SM, **(FILL)** | DP S-2 | 100 | |
| | | | 6.0 ft 5.0 | | | |
| | | | End of boring at 6.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B-4



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/20/2024 **DATE COMPLETED** 06/20/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623716 **LONGITUDE** -70.917455
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 2'-3' bgs. | Tan, Silty Sand with Gravel, Trace Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.5 ft — 9.5 | | | |
| | | Rock Fragments at 4.5' bgs. | Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | | DP S-2 | 100 | |
| | | | 7.0 ft — 4.0 | | | |
| | | | End of boring at 7.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B-5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/01/2024 **DATE COMPLETED** 05/01/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623783 **LONGITUDE** -70.917475
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 1'-2', 2'-3', & 4'-5' bgs. | Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** 1.0 ft | | | |
| | | | Brown, Poorly-Graded Sand with Silt and Gravel, Trace Shell Fragments, Dry to Moist, SP-SM, **(FILL)** 10.0 | DP S-1 | 100 | |
| 5 | | | 6.3 ft 4.7 | DP S-2 | 100 | |
| | | | End of boring at 6.3 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B-6



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/01/2024 **DATE COMPLETED** 05/01/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623850 **LONGITUDE** -70.917496
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 1'-2' bgs. | Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.0 ft — 10.0 | | | |
| | | | Brown, Poorly-Graded Sand with Silt and Gravel, Trace Shell Fragments, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | | DP S-2 | 100 | |
| | | | 6.3 ft — 4.7 | | | |
| | | | End of boring at 6.3 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER BB0



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/29/2023 **DATE COMPLETED** 12/29/2023
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623402 **LONGITUDE** -70.917640
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1', 1'-2', 2'-3', & 3'-4' bgs. | Brown, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 75 | |
| | | | 4.0 ft 6.0 | | | |
| | | | End of boring at 4.0 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER BB-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/30/2024 **DATE COMPLETED** 04/30/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623469 **LONGITUDE** -70.917661
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted as a composite and from 0'-1', 1'-2', 2'-3', 3'-4', & 4'-5' bgs. | Gray, Silty Sand, Dry, SM, **(FILL)** | | | |
| | | | 1.5 ft — 9.5<br>Tan, Poorly-Graded Sand with Silt and Gravel, Few Shell Fragments, Dry, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 5.0 ft — 6.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER BB-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/29/2023 **DATE COMPLETED** 12/29/2023
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623536 **LONGITUDE** -70.917681
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 1'-2', 2'-3', & 3'-4' bgs. | Brown, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 75 | |
| 4.0 ft / 7.0 | | | Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** | DP S-2 | 75 | |
| 8.0 ft / 3.0 | | | End of boring at 8.0 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER BB-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/30/2024 **DATE COMPLETED** 04/30/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623603 **LONGITUDE** -70.917702
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted as composite and from 1'-2' & 4'-5' bgs. | Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | | | |
| 2.0 ft / 9.0 | | | Tan to Brown, Poorly-Graded Sand with Silt and Gravel, Trace Shells, Dry, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | | DP S-2 | 100 | |
| 6.0 ft / 5.0 | | | End of boring at 6.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER BB-4



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/30/2024 **DATE COMPLETED** 04/30/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623670 **LONGITUDE** -70.917722
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 1'-2' & 4'-5' bgs. | Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | | | |
| 2.0 ft / 9.0 | | | Tan to Brown, Poorly-Graded Sand with Silt and Gravel, Trace Shells, Dry, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | | DP S-2 | 100 | |
| 6.0 ft / 5.0 | | | End of boring at 6.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER BB-5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/30/2024 **DATE COMPLETED** 04/30/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623737 **LONGITUDE** -70.917743
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted as composite and from 1'-2' & 4'-5' bgs. | Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | | | |
| 2.0 ft – 9.0 | | | Tan to Brown, Poorly-Graded Sand with Silt and Gravel, Trace Shells, Dry, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | | DP S-2 | 100 | |
| 6.0 ft – 5.0 | | | End of boring at 6.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER BB-6



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/30/2024 **DATE COMPLETED** 04/30/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623803 **LONGITUDE** -70.917763
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Trace Roots from 0-0.5' bgs.<br><br>Analytical samples submitted from 1'-2' & 4'-5' bgs. | Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| 3.5 ft | | | Brown, Poorly-Graded Sand with Silt and Gravel, Moist, SP-SM, **(FILL)** 7.5 | | | |
| 5.0 ft | | | 6.0 | | | |
| 5 | | | End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER BB-7



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/30/2024 **DATE COMPLETED** 04/30/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623870 **LONGITUDE** -70.917784
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Trace roots from 0-0.5' bgs.<br><br>Analytical samples submitted as composite from 1'-4' bgs. | Brown to Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| 3.0 ft | | | 8.0 | | | |
| 4.0 ft | | | Gray to Brown, Poorly-Graded Sand with Silt and Gravel, Dry to Moist, SP-SM, **(FILL)** | | | |
| | | | 7.0 | | | |
| | | | End of boring at 4.0 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER C0



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/01/2024 **DATE COMPLETED** 05/01/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623464 **LONGITUDE** -70.917284
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1', 1'-2' & 4'-5' bgs. | 0.8 ft Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** 9.2<br>Tan, Silty Sand, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 3.5 ft Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM **(FILL)** 6.5<br>5.5 ft 4.5<br>End of boring at 5.5 feet | DP S-2 | 100 | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER C-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623531 **LONGITUDE** -70.917304
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED B** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted as composite and from 0'-1', 1'-2', & 3'-4' bgs. | 0.5 ft Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** 10.5<br>Tan, Silty Sand, Dry, SM, **(FILL)**<br>2.5 ft 8.5<br>Brown to Tan, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)**<br>4.0 ft 7.0<br>End of boring at 4.0 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER C-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/29/2023 **DATE COMPLETED** 12/29/2023
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623613 **LONGITUDE** -70.917236
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1', 1'-2', 2'-3', & 3'-4' bgs. | Brown, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 4.0 ft 7.0 End of boring at 4.0 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER C-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623664 **LONGITUDE** -70.917345
**SAMPLING METHOD** Direct Push
**WATER LEVELS** ▽ **AT END OF SOIL SAMPLING** N/A
**CEC REP** D Barboza **CHECKED BY** Tony Sousa, P.E.
▼ **AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
▼ **24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted as a composite and from 1'-2' & 4'-5' bgs. | 0.8 ft — Brown, Silty Sand with Gravel, Few Roots, Dry, SM, **(TOPSOIL)** — 10.2<br>Tan, Silty Sand with Gravel, Dry, SM, **(FILL)**<br>3.5 ft — 7.5<br>Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)**<br>4.8 ft — 6.2<br>End of boring at 4.8 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER C-4



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/29/2023 **DATE COMPLETED** 12/29/2023
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623731 **LONGITUDE** -70.917366
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1', 1'-2', & 2'-3' bgs. | Brown, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 75 | |
| | | | 4.0 ft 7.0 | | | |
| | | | End of boring at 4.0 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER C-5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623798 **LONGITUDE** -70.917386
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted as composite and from 1'-2' & 4'-5' bgs.<br><br>Rock fragments at 4' bgs. | 0.5 ft Brown, Silty Sand with Gravel, Few Roots, Dry, SM, **(TOPSOIL)** 10.5<br>Tan, Silty Sand, Dry, SM, **(FILL)**<br>2.0 ft 9.0<br>Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)**<br>5.0 ft 6.0<br>End of boring at 5.0 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER C-6



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623865 **LONGITUDE** -70.917407
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 1'-2' bgs.<br>Rock fragments at 2' bgs. | 0.5 ft Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** 10.5<br>1.0 ft Tan, Silty Sand, Dry, SM, **(FILL)** 10.0<br>Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)**<br>4.0 ft 7.0<br>End of boring at 4.0 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER C-7



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623932 **LONGITUDE** -70.917427
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted as composite from 1'-4' bgs. | 0.5 ft — Brown, Silty Sand with Gravel, Few Roots, Dry, SM, **(TOPSOIL)** — 10.5<br>Tan, Silty Sand, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 4.0 ft — 7.0<br>4.3 ft — Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** — 6.7<br>End of boring at 4.3 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER CC0



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623387 **LONGITUDE** -70.917729
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 1'-2', 3'-4', & 5'-6' bgs. | Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.0 ft — 9.0 | | | |
| | | | Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 3.0 ft — 7.0 | | | |
| | | | Brown, Poorly-Graded Sand with Silt and Gravel, Trace Brick, Trace Wood, Dry, SP-SM, **(FILL)** | | | |
| 5 | | | | DP S-2 | 100 | |
| | | | 6.0 ft — 4.0 | | | |
| | | | End of boring at 6.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER CC-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623454 **LONGITUDE** -70.917750
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 1'-2', 3'-4', & 5'-6' bgs. | Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.0 ft — 10.0 | | | |
| | | | Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 3.0 ft — 8.0 | | | |
| | | | Brown, Poorly-Graded Sand with Silt and Gravel, Trace Brick, Trace Wood, Dry, SP-SM, **(FILL)** | | | |
| 5 | | | | DP S-2 | 100 | |
| | | | 6.0 ft — 5.0 | | | |
| | | | End of boring at 6.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER CC-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623521 **LONGITUDE** -70.917770
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 1'-2' & 4'-5' bgs. | Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.0 ft — 10.0 | | | |
| | | | Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 3.0 ft — 8.0 | | | |
| 5 | | | Brown, Poorly-Graded Sand with Silt and Gravel, Trace Brick, Trace Wood, Dry, SP-SM, **(FILL)** | DP S-2 | 100 | |
| | | | 6.0 ft — 5.0 | | | |
| | | | End of boring at 6.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER D0



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/29/2023 **DATE COMPLETED** 12/29/2023
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623479 **LONGITUDE** -70.917195
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1', 1'-2', & 2'-3' bgs. | Brown, Silty Sand with Gravel, Trace Brick, Dry, SM, **(FILL)** | DP S-1 | 75 | |
| | | | 4.0 ft 6.0 | | | |
| | | | End of boring at 4.0 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER D-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/29/2023 **DATE COMPLETED** 12/29/2023
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623546 **LONGITUDE** -70.917215
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1', 1'-2' & 2'-3' bgs. | Brown, Silty Sand with Gravel, Trace Brick, Dry, SM, **(FILL)** | DP 'S-1 | 75 | |
| 4.0 ft | | | 7.0 | | | |
| | | | End of boring at 4.0 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER D-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623613 **LONGITUDE** -70.917236
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 1'-2' bgs. | 0.4 ft Asphalt 10.6<br>Brown, Poorly-Graded Sand with Silt and Gravel, Trace Shell Fragments, Dry, SP-SM **(FILL)** | | | |
| | | | 2.0 ft 9.0<br>Brown, Well -Graded Sand with Gravel, Dry, SW, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 5.5 ft 5.5<br>End of boring at 5.5 feet | DP S-2 | 100 | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER D-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/29/2023 **DATE COMPLETED** 12/29/2023
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623680 **LONGITUDE** -70.917256
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1', 1'-2', & 2'-3' bgs. | Brown, Silty Sand, Trace Bricks, Dry, SM, **(FILL)** | DP S-1 | 75 | |
| | | | 4.0 ft 7.0 | | | |
| | | | End of boring at 4.0 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER D-4



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623747 **LONGITUDE** -70.917277
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 1'-2' & 4'-5' bgs. | 0.4 ft Asphalt 10.6<br>Brown, Poorly-Graded Sand with Silt and Gravel, Trace Shell Fragments, Dry, SP-SM **(FILL)** | | | |
| | | | 2.0 ft 9.0<br>Brown, Well-Graded Sand with Gravel, Dry, SW **(FILL)** | DP S-1 | 100 | |
| 5 | | | 5.5 ft 5.5<br>End of boring at 5.5 feet | DP S-2 | 100 | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER D-8.5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624048 **LONGITUDE** -70.917369
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted as composite from 1'-3' bgs. | 0.4 ft Asphalt 10.6<br>Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 3.5 ft 7.5<br>4.0 ft Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** 7.0<br>End of boring at 4.0 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER DD0



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623372 **LONGITUDE** -70.917818
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 1'-2' & 4'-5' bgs. | Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.0 ft — 9.0 | | | |
| | | | Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 3.0 ft — 7.0 | | | |
| | | | Brown, Poorly-Graded Sand with Silt and Gravel, Trace Brick, Trace Wood, Dry, SP-SM, **(FILL)** | | | |
| 5 | | | 6.0 ft — 4.0 | DP S-2 | 100 | |
| | | | End of boring at 6.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER DD-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623438 **LONGITUDE** -70.917839
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted as composite and from 1'-2' & 4'-5' bgs. | Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.0 ft — 10.0 | | | |
| | | | Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 3.0 ft — 8.0 | | | |
| 5 | | | Brown, Poorly-Graded Sand with Silt and Gravel, Trace Brick, Trace Wood, Dry, SP-SM, **(FILL)** | DP S-2 | 100 | |
| | | | 6.0 ft — 5.0 | | | |
| | | | End of boring at 6.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER DD-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/20/2024 **DATE COMPLETED** 06/20/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623505 **LONGITUDE** -70.917859
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | | Tan, Silty Sand, Trace Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.0 ft — 10.0 | | | |
| | | Analytical sample submitted from 3'-4' bgs. | Brown, Poorly-Graded Sand with Silt, Trace Shell Fragments, Dry, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | | DP S-2 | 100 | |
| | | | 6.0 ft — 5.0 | | | |
| | | | End of boring at 6.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER DD-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/30/2024 **DATE COMPLETED** 04/30/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623572 **LONGITUDE** -70.917880
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 1'-4' bgs. | 0.5 ft Asphalt<br>Tan, Poorly-Graded Sand with Gravel, Dry, SP, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 5.0 ft<br>Brown, Poorly-Graded Sand with Gravel, Dry, SP, **(OUTWASH)** | DP S-2 | 100 | |
| | | | 8.0 ft<br>End of boring at 8.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER DD-5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/30/2024 **DATE COMPLETED** 04/30/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623706 **LONGITUDE** -70.917921
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 1'-4' bgs. | 0.5 ft Asphalt<br>Tan, Silty Sand, Dry, SM, **(FILL)** 10.5<br>1.5 ft 9.5<br>Gray, Poorly-Graded Sand with Gravel, Trace Shells, Dry, SP, **(FILL)**<br>4.5 ft 6.5<br>End of boring at 4.5 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER DD-7



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/30/2024 **DATE COMPLETED** 04/30/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623839 **LONGITUDE** -70.917962
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 0.5'-3' bgs. | 0.4 ft Concrete 10.6<br>Tan, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)**<br>2.0 ft 9.0<br>Tan, Silty Sand, Dry, SM, **(FILL)**<br>3.0 ft 8.0<br>End of boring at 3.0 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER E0



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/29/2023 **DATE COMPLETED** 06/21/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623495 **LONGITUDE** -70.917105
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | | Dark Brown, Well-Graded Sand with Silt and Gravel, Dry, SW-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 5.0 ft — 5.0<br>Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-2 | 100 | |
| 10 | | Analytical samples submitted from 0'-1', 1'-2', 2'-3', & 9'-10' bgs. | 8.5 ft — 1.5<br>Brown, Poorly-Graded Sand with Gravel, Dry, SP, **(FILL)**<br>10.0 ft — 0.0<br>End of boring at 10.0 feet | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER E-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623562 **LONGITUDE** -70.917126
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted as a composite and from 0'-1', 1'-2', 2'-3', 4'-5' & 9'-10' bgs. | Brown, Well-Graded Sand with Silt and Gravel, Dry, SW-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 5.0 ft — 6.0<br>Tan, Poorly-Graded Sand with Gravel, Dry, SP, **(FILL)** | | | |
| | | | 6.5 ft — 4.5<br>Brown, Poorly-Graded Sand with Silt and Gravel, Few Asphalt/Brick Fragments, Dry, SP-SM, **(FILL)** | DP S-2 | 100 | |
| 10 | | | 10.0 ft — 1.0<br>End of boring at 10.0 feet | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER E-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/03/2024 **DATE COMPLETED** 05/03/2024
**GROUND ELEVATION** 15.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623628 **LONGITUDE** -70.917147
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Boring located inside existing building.<br><br>Analytical sample submitted from 1'-2' & 4'-5' bgs. | 0.5 ft Concrete 14.5<br>Brown to Tan, Silty Sand with Gravel, Trace Brick, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 6.5 ft 8.5<br>Tan to Brown, Silty Sand with Gravel, Dry, SM, **(OUTWASH)** | DP S-2 | 100 | |
| | | | 9.5 ft 5.5<br>End of boring at 9.5 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER E-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/03/2024 **DATE COMPLETED** 05/03/2024
**GROUND ELEVATION** 15.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623695 **LONGITUDE** -70.917167
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-3' & 3'-7' bgs. | 0.5 ft Concrete 14.5<br>Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 3.0 ft 12.0<br>Brown, Silty Sand with Gravel, Dry, SM, **(OUTWASH)** | DP S-2 | 100 | |
| 5 | | | 8.0 ft 7.0<br>End of boring at 8.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER E-5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623829 **LONGITUDE** -70.917208
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 1'-4' bgs. | 0.4 ft Asphalt 10.6<br>Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** | DP S-1 | 100 | |
| | | Rock fragments at 3.5' bgs. | 4.3 ft 6.7<br>End of boring at 4.3 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER E-7



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623963 **LONGITUDE** -70.917249
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 1'-4' bgs. | 0.4 ft Asphalt 10.6<br>1.0 ft Brown, Poorly-Graded Sand with Silt and Gravel, Trace Shell Fragments, Dry, SP-SM **(FILL)** 10.0<br>Tan, Silty Sand with Gravel, Dry, SM, **(FILL)**<br>4.5 ft 6.5<br>End of boring at 4.5 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER EE0



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623356 **LONGITUDE** -70.917907
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 1'-2' bgs. | Gray, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** | | | |
| | | | 1.0 ft — 9.0 | | | |
| | | | Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 3.0 ft — 7.0 | | | |
| | | | 3.5 ft — Brown, Poorly-Graded Sand with Clay and Gravel, Dry, SP-SC, **(FILL)** — 6.5 | | | |
| | | | End of boring at 3.5 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER EE0.5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623323 **LONGITUDE** -70.917897
**SAMPLING METHOD** Direct Push
**WATER LEVELS** ▽ **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
▼ **AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
▼ **24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 1'-2' bgs. | Gray, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** | | | |
| | | | 1.0 ft / 9.0<br>Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 3.0 ft / 7.0<br>3.5 ft / 6.5<br>Brown, Poorly-Graded Sand with Clay and Gravel, Dry, SP-SC, **(FILL)** | | | |
| 5 | | | End of boring at 3.5 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER EE-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/20/2024 **DATE COMPLETED** 06/20/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623423 **LONGITUDE** -70.917928
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | | Tan, Silty Sand, Trace Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.0 ft — 10.0 | | | |
| | | Analytical sample submitted from 3'-4' bgs. | Brown, Poorly-Graded Sand with Silt, Trace Shell Fragments, Dry, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | | DP S-2 | 100 | |
| | | | 7.0 ft — 4.0 | | | |
| | | | End of boring at 7.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER EE-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/20/2024 **DATE COMPLETED** 06/20/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623490 **LONGITUDE** -70.917948
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | | 0.5 ft Brown, Silty Sand, Trace Roots, Dry, SM, **(TOPSOIL)** 10.5 | | | |
| | | Analytical sample submitted from 3'-4' bgs. | Brown to Tan, Poorly-Graded Sand with Silt and Gravel, Trace Shell Fragments, Dry, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | Brick fragments at 4' bgs. | 5.0 ft 6.0 | | | |
| | | | End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER EE-8.5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623924 **LONGITUDE** -70.918082
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 1'-4' bgs. | 0.5 ft Brown, Silty Sand, Trace Roots, Dry, SM, **(TOPSOIL)** 9.5<br>Tan, Silty Sand, Dry, SM, **(FILL)**<br>3.0 ft 7.0<br>Brown to Gray, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)**<br>4.5 ft 5.5<br>End of boring at 4.5 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER F0



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/29/2023 **DATE COMPLETED** 12/29/2023
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623510 **LONGITUDE** -70.917016
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1', 1'-2', 2'-3', & 3'-4' bgs. | Brown, Silty Sand, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 4.0 ft 6.0 | | | |
| | | | End of boring at 4.0 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER F-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623577 **LONGITUDE** -70.917037
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1' & 1'-2' bgs. | Brown, Silty Sand, Trace Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.0 ft — 10.0<br>Tan, Poorly-Graded Sand, Dry, SP, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 5.0 ft — 6.0<br>Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | | | |
| | | | 6.5 ft — 4.5<br>Brown, Poorly-Graded Sand with Silt and Gravel, Trace Brick Fragments, Dry, SP-SM, **(FILL)** | DP S-2 | 100 | |
| 10 | | | 10.0 ft — 1.0<br>End of boring at 10.0 feet | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER F-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/03/2024 **DATE COMPLETED** 05/03/2024
**GROUND ELEVATION** 15.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623644 **LONGITUDE** -70.917057
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Boring located inside existing building.<br><br>Analytical samples submitted from 1'-2' & 4'-5' bgs.<br><br>Brick and rock fragments observed from 2 to 7' bgs. | 0.5 ft Concrete<br>Brown, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | | DP S-2 | 100 | |
| | | | 9.5 ft 5.5<br>End of boring at 9.5 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER FF0



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623341 **LONGITUDE** -70.917997
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 1'-2' & 4'-5' bgs. | Gray, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** | | | |
| | | | 1.0 ft / 9.0 — Tan, Silty Sand, Little Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 3.0 ft / 7.0 — Brown, Poorly-Graded Sand with Clay and Gravel, Dry, SP-SC, **(FILL)** | | | |
| 5 | | | 5.0 ft / 5.0 — End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER FF-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623408 **LONGITUDE** -70.918017
**SAMPLING METHOD** Direct Push
**WATER LEVELS** ▽ **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
▼ **AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
▼ **24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted as composite and from 0'-1', 1'-2', 3'-4', & 4'-5' bgs.<br><br>Brick fragments at 4' bgs. | Gray, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** | DP S-1 | 100 | |
| | | | 1.0 ft — 10.0<br>Tan, Silty Sand, Dry, SM, **(FILL)** | | | |
| | | | 3.0 ft — 8.0 | | | |
| | | | 3.5 ft — 7.5<br>Brown, Poorly-Graded Sand with Clay, Dry, SP-SC, **(FILL)** | | | |
| 5 | | | Brown, Poorly-Graded Sand with Gravel, Dry, SP, **(FILL)** | | | |
| | | | 5.0 ft — 6.0 | | | |
| | | | End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER FF-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/20/2024 **DATE COMPLETED** 06/20/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623474 **LONGITUDE** -70.918038
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 1'-2' & 4'-5' bgs. | Gray, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** | | | |
| | | | 1.0 ft — Tan, Silty Sand, Dry, SM, **(FILL)** — 10.0 | | | |
| | | | 3.0 ft — Brown, Poorly-Graded Sand with Clay, Dry, SP-SC, **(FILL)** — 8.0 | DP S-1 | 100 | |
| | | | 3.5 ft — Brown, Poorly-Graded Sand with Gravel, Dry, SP, **(FILL)** — 7.5 | | | |
| 5 | | | 5.0 ft — 6.0 | | | |
| | | | End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER FF-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623541 **LONGITUDE** -70.918058
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 1' to 4' bgs. | 0.5 ft Asphalt 10.5<br>Tan, Silty Sand, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 3.5 ft 7.5<br>4.0 ft Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** 7.0<br>End of boring at 4.0 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER FF-5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623675 **LONGITUDE** -70.918099
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 1'-4' bgs. | 0.5 ft Brown, Silty Sand, Trace Roots, Dry, SM, **(TOPSOIL)** 10.5<br>Tan, Silty Sand with Gravel, Dry, SM, **(FILL)**<br>4.0 ft 7.0<br>End of boring at 4.0 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER FF-7



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623809 **LONGITUDE** -70.918140
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 1'-3.5' bgs. | 0.5 ft Asphalt 9.5<br>Tan, Poorly-Graded Sand with Silt, Dry, SP-SM, **(FILL)** | DP S-1 | 100 | |
| | | | 3.0 ft 7.0<br>3.5 ft Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** 6.5<br>End of boring at 3.5 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER G0



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/21/2024 **DATE COMPLETED** 06/21/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623525 **LONGITUDE** -70.916927
**SAMPLING METHOD** Direct Push
**WATER LEVELS** AT END OF SOIL SAMPLING N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
AT END OF CORING N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
24 HRS AFTER DRILLING N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 0'-1' bgs. | Tan, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.5 ft — 8.5<br>Brown, Poorly-Graded Sand with Gravel, Dry, SP, **(FILL)** | DP S-1 | 100 | |
| 5 | | | | DP S-2 | 100 | |
| | | | 8.5 ft — 1.5<br>Brown, Peat, Moist, PT, **(ORGANICS)** | | | |
| 10 | | | 10.0 ft — 0.0<br>End of boring at 10.0 feet | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER G-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623592 **LONGITUDE** -70.916948
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted as composite and from 0'-1', 1'-2', 4'-5', & 9'-10' bgs. | Brown, Silty Sand, Trace Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 1.0 ft — 10.0<br>Tan, Poorly-Graded Sand, Dry, SP, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 5.0 ft — 6.0<br>Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | | | |
| | | | 6.5 ft — 4.5<br>Brown, Poorly-Graded Sand with Silt and Gravel, Trace Brick Fragments, Dry, SP-SM, **(FILL)** | DP S-2 | 100 | |
| 10 | | | 10.0 ft — 1.0<br>End of boring at 10.0 feet | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER G-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/03/2024 **DATE COMPLETED** 05/03/2024
**GROUND ELEVATION** 15.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623659 **LONGITUDE** -70.916968
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Boring located inside existing building.<br><br>Analytical samples submitted from 1'-2' & 4'-5' bgs. | 0.5 ft Concrete 14.5<br>Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | | DP S-2 | 100 | |
| | | | 9.5 ft 5.5<br>End of boring at 9.5 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER G-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/01/2024 **DATE COMPLETED** 05/01/2024
**GROUND ELEVATION** 15.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623726 **LONGITUDE** -70.916989
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Boring located inside existing building. | 0.5 ft Concrete 14.5 | | | |
| | | | Tan, Silty Sand, Trace Gravel, Dry, SM, **(FILL)** | | | |
| | | Analytical samples submitted from 0'-4' & 4'-8' bgs. | 2.5 ft 12.5 | DP S-1 | 100 | |
| | | | Brown, Poorly-Graded Sand with Silt, Little Gravel, Dry, SP-SM, **(FILL)** | | | |
| 5 | | | | DP S-2 | 100 | |
| | | | 8.0 ft 7.0 | | | |
| | | | End of boring at 8.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER G-5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623860 **LONGITUDE** -70.917030
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Rock fragments at 3.5' bgs.<br><br>Analytical samples submitted as composite and from 5'-6' & 9'-10' bgs. | 0.4 ft Asphalt<br>Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 4.3 ft<br>Brown, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-2 | 100 | |
| 10 | | | 10.0 ft<br>End of boring at 10.0 feet | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER G-7



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623994 **LONGITUDE** -70.917071
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 1'-4' bgs. | 0.4 ft Asphalt 10.6<br>1.0 ft Brown, Poorly-Graded Sand with Silt and Gravel, Trace Shell Fragments, Dry, SP-SM **(FILL)** 10.0<br>Tan to Brown, Silty Sand with Gravel, Dry, SM, **(FILL)**<br>4.0 ft 7.0<br>4.5 ft 6.5<br>End of boring at 4.5 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER GG0



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623325 **LONGITUDE** -70.918086
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 1'-2' bgs. | 0.8 ft Brown, Silty Sand, Trace Roots, Dry, SM, **(TOPSOIL)** 9.2<br>Tan, Silty Sand, Dry, SM, **(FILL)**<br>4.0 ft 6.0<br>End of boring at 4.0 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER GG-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/20/2024 **DATE COMPLETED** 06/20/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623392 **LONGITUDE** -70.918106
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 1'-2' & 4'-5' bgs. | Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 3.0 ft – 8.0<br>Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** | | | |
| 5 | | | 5.0 ft – 6.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER GG-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/20/2024 **DATE COMPLETED** 06/20/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623459 **LONGITUDE** -70.918127
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Trace roots from 0'-1' bgs.<br><br>Analytical samples submitted from 1'-2' & 4'-5' bgs. | Tan, Silty Sand, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| 4.0 ft | | | 7.0 | | | |
| | | | Brown, Silty Sand with Gravel, Dry, SM, **(FILL)** | | | |
| 5.0 ft | | | 6.0 | | | |
| 5 | | | End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER H0



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/29/2023 **DATE COMPLETED** 12/29/2023
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623541 **LONGITUDE** -70.916838
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1', 1'-2', & 2'-3' bgs. | Brown, Silty Sand, Trace Brick, Dry, SM, **(FILL)** | DP S-1 | 75 | |
| | | | 4.0 ft 6.0 | | | |
| | | | End of boring at 4.0 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER H-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623608 **LONGITUDE** -70.916859
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 1'-2' & 4'-5' bgs. | 0.8 ft — Brown, Silty Sand, Trace Roots, Dry, SM, **(TOPSOIL)** — 10.2<br>Tan, Poorly-Graded Sand, Dry, SP, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 5.0 ft — 6.0<br>Tan, Silty Sand with Gravel, Dry, SM, **(FILL)**<br>6.5 ft — 4.5<br>Brown, Poorly-Graded Sand with Silt and Gravel, Trace Brick Fragments, Dry, SP-SM, **(FILL)** | DP S-2 | 100 | |
| 10 | | | 10.0 ft — 1.0<br>End of boring at 10.0 feet | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER H-8.5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624109 **LONGITUDE** -70.917013
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted as a composite. | 0.5 ft Asphalt<br>Brown to Tan, Poorly Graded Sand with Silt and Gravel, Dry, SM, **(FILL)** 10.5<br>4.5 ft 6.5<br>End of boring at 4.5 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER HH0



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623310 **LONGITUDE** -70.918175
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 1'-2' & 4'-5' bgs. | 0.5 ft Brown, Silty Sand, Trace Roots, Dry, SM, **(TOPSOIL)** 9.5<br>Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 5.0 ft 5.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER HH-0.5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/20/2024 **DATE COMPLETED** 06/20/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623523 **LONGITUDE** -70.916833
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 0'-1' bgs. | Brown, Silty Sand, Trace Brick, Dry, SM, **(FILL)** | DP S-1 | 75 | |
| | | | 4.0 ft 6.0 | | | |
| | | | End of boring at 4.0 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER HH-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623377 **LONGITUDE** -70.918195
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted as a composite. | Brown, Silty Sand, Dry, SM, **(FILL)** | | | |
| | | | 1.5 ft — 9.5 | DP S-1 | 100 | |
| | | | Tan, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** | | | |
| | | | 4.0 ft — 7.0 | | | |
| | | | End of boring at 4.0 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER HH-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/30/2024 **DATE COMPLETED** 04/30/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623510 **LONGITUDE** -70.918236
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted as a composite. | Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** 1.0 ft<br>Tan, Silty Sand, Dry, SM, **(FILL)** 10.0<br>5.0 ft 6.0<br>End of boring at 5.0 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER HH-5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/30/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623644 **LONGITUDE** -70.918277
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted as a composite. | 0.5 ft Brown, Silty Sand, Trace Roots, Dry, SM, **(TOPSOIL)** 10.5<br>Tan, Silty Sand, Dry, SM, **(FILL)**<br>4.0 ft 7.0<br>End of boring at 4.0 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER HH-7



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623778 **LONGITUDE** -70.918318
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted as a composite. | 0.5 ft Asphalt<br>Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** 9.5<br>3.0 ft Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** 7.0<br>4.0 ft 6.0<br>End of boring at 4.0 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER I0.5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623540 **LONGITUDE** -70.916744
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 0'-1' bgs. | Tan, Silty Sand, Dry, SM, **(FILL)** | | | |
| | | | 1.5 ft — Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** — 8.5 | DP S-1 | 100 | |
| | | | 4.0 ft — 6.0 | | | |
| | | | End of boring at 4.0 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER I-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623623 **LONGITUDE** -70.916770
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted as a composite. | Tan to Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 4.0 ft | | | 7.0 | | | |
| | | | End of boring at 4.0 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER I-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/01/2024 **DATE COMPLETED** 05/01/2024
**GROUND ELEVATION** 15.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623757 **LONGITUDE** -70.916811
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Boring located inside existing building. | 0.5 ft Concrete 14.5 | | | |
| | | | Tan, Silty Sand, Dry, SM, **(FILL)** | | | |
| | | Analytical sample submitted as composite and from 4'-8' bgs. | 2.5 ft 12.5 | DP S-1 | 100 | |
| | | | Tan to Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** | | | |
| 5 | | | | DP S-2 | 100 | |
| | | | 8.0 ft 7.0 | | | |
| | | | End of boring at 8.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER I-5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623891 **LONGITUDE** -70.916852
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted as composite. | 0.5 ft Asphalt<br>Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** 10.5 | DP S-1 | 100 | |
| | | | 3.5 ft Tan to Gray, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** 7.5<br>4.3 ft 6.7 | | | |
| | | | End of boring at 4.3 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER I-7



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 05/02/2024 **DATE COMPLETED** 05/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624024 **LONGITUDE** -70.916893
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted as composite. | 0.5 ft Asphalt<br>Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** 10.5 | DP S-1 | 100 | |
| | | | 3.5 ft<br>Tan to Gray, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** 7.5<br>4.3 ft 6.7 | | | |
| 5 | | | End of boring at 4.3 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER II0



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623294 **LONGITUDE** -70.918264
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 1'-2' bgs. | Tan, Silty Sand, Dry, SM, **(FILL)** | | | |
| | | | 1.5 ft — 9.5 | DP S-1 | 100 | |
| | | | Tan, Silty Sand with Gravel, Dry, SM, **(FILL)** | | | |
| | | | 4.0 ft — 7.0 | | | |
| 5 | | | End of boring at 4.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER II-0.5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/20/2024 **DATE COMPLETED** 06/20/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623261 **LONGITUDE** -70.918254
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Brick fragments at 0.75' bgs. | 0.8 ft — Brown, Silty Sand, Trace Roots, Dry, SM, **(TOPSOIL)** — 9.2 | | | |
| | | | Tan to Brown, Silty Sand, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | Analytical sample submitted as composite and from 1'-2' & 4'-5' bgs. | 6.0 ft — 4.0 | | | |
| | | | Tan, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** | DP S-2 | 100 | |
| | | | 8.0 ft — 2.0 | | | |
| | | | End of boring at 8.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER II-8.5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623863 **LONGITUDE** -70.918438
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** 04/29/2024 8.0 ft / Elev 2.0 ft
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted as composite and from 5'-6' bgs. | 0.5 ft Asphalt<br>Tan, Silty Sand, Dry, SM, **(FILL)** 9.5<br>2.0 ft Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** 8.0 | DP S-1 | 100 | |
| 5 | | | 4.0 ft Brown, Poorly-Graded Sand with Silt and Gravel, Few Organics, Dry, SP-SM, **(FILL)** 6.0<br>5.5 ft Brown, Peat, Moist, PT, **(ORGANICS)** 4.5<br>6.2 ft Gray to Tan, Poorly-Graded Sand with Silt and Gravel, Moist to Wet, SP-SM 3.8 | DP S-2 | 100 | |
| 10 | | | 11.3 ft -1.3<br>End of boring at 11.3 feet | DP S-3 | 100 | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER J0



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 12/29/2023 **DATE COMPLETED** 12/29/2023
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623572 **LONGITUDE** -70.916660
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1', 1'-2', 2'-3', & 3'-4' bgs. | Brown, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 4.0 ft 6.0 | | | |
| | | | End of boring at 4.0 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER JJ0



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623279 **LONGITUDE** -70.918353
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 1'-2' bgs. | Tan, Silty Sand, Dry, SM, **(FILL)** | | | |
| | | | 1.0 ft — Tan, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** — 10.0 | DP S-1 | 100 | |
| | | | 4.0 ft — 7.0 | | | |
| | | | End of boring at 4.0 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER JJ-0.5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/20/2024 **DATE COMPLETED** 06/20/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623242 **LONGITUDE** -70.918341
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Brick fragments at 0.75' bgs. | 0.8 ft — Light Brown, Poorly-Graded Sand with Silt, Trace Roots, Dry, SP-SM, **(TOPSOIL)** — 10.2 | | | |
| | | | Tan to Brown, Silty Sand, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | Analytical sample submitted from 1'-2' & 4'-5' bgs. | | | | |
| 5 | | | 6.0 ft — 5.0 | | | |
| | | | Tan, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** | DP S-2 | 100 | |
| | | | 7.5 ft — 3.5 | | | |
| | | | End of boring at 7.5 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER JJ/II-2



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623421 **LONGITUDE** -70.918349
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted as composite. | 0.5 ft Brown, Silty Sand, Trace Roots, Dry, SM, **(TOPSOIL)** 10.5<br>Tan, Silty Sand with Gravel, Dry, SM, **(FILL)**<br>3.5 ft 7.5<br>End of boring at 3.5 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER JJ/II-6



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 04/29/2024 **DATE COMPLETED** 04/29/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623688 **LONGITUDE** -70.918432
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (54 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted as composite. | 0.5 ft Tan, Silty Sand, Trace Roots, Dry, SM, **(FILL)** 10.5<br>Tan, Silty Sand, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | Trace Peat at 4.25'-4.5' bgs. | 4.5 ft 6.5<br>End of boring at 4.5 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER A0-5W



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/02/2024 **DATE COMPLETED** 07/02/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623430 **LONGITUDE** -70.917480
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1' bgs. | Brown, Poorly-Graded Sand with Silt, Trace Roots, Dry, SP-SM, **(TOPSOIL)** 1.0 ft – 9.0 | DP S-1 | 100 | |
| | | | Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** 5.0 ft – 5.0 | | | |
| 5 | | | End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B0-5E



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/21/2024 **DATE COMPLETED** 06/21/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623452 **LONGITUDE** -70.917355
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 0'-1' bgs. | 0.8 ft Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** 9.2<br>Tan, Silty Sand, Dry, SM, **(FILL)**<br>4.5 ft 5.5<br>End of boring at 4.5 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B0-5W



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/21/2024 **DATE COMPLETED** 06/21/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623445 **LONGITUDE** -70.917391
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 0'-1' bgs. | 0.8 ft Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** 9.2<br>Tan, Silty Sand, Dry, SM, **(FILL)**<br>4.5 ft 5.5<br>End of boring at 4.5 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B0-5N



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/21/2024 **DATE COMPLETED** 06/21/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623462 **LONGITUDE** -70.917377
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 0'-1' bgs. | 0.8 ft Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** 10.2<br>Tan, Silty Sand, Dry, SM, **(FILL)**<br>4.5 ft 6.5<br>End of boring at 4.5 feet | DP S-1 | 100 | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B0-5S



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/21/2024 **DATE COMPLETED** 06/21/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623435 **LONGITUDE** -70.917369
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 0'-1' bgs. | Brown, Silty Sand with Gravel, Trace Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 2.0 ft — 8.0 | | | |
| | | | Tan, Silty Sand with Gravel, Trace Glass and Asphalt Debris, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | Sampler refusal at 6' bgs due to brick fragments in sampler tip. | | DP S-2 | 100 | |
| | | | 6.0 ft — 4.0 | | | |
| | | | End of boring at 6.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B0-10E



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/21/2024 **DATE COMPLETED** 06/21/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623455 **LONGITUDE** -70.917337
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 0'-1' & 2'-3' bgs. | 0.8 ft Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** 9.2 | DP S-1 | 100 | |
| | | | Tan, Silty Sand, Dry, SM, **(FILL)** | | | |
| | | | 4.5 ft 5.5 | | | |
| 5 | | | End of boring at 4.5 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B0-10W



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/21/2024 **DATE COMPLETED** 06/21/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623442 **LONGITUDE** -70.917408
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 0'-1' & 2'-3' bgs. | 0.5 ft Brown, Silty Sand, Trace Roots, SM, **(TOPSOIL)** 9.5<br>Tan to Brown, Poorly-Graded Sand with Gravel, SP, **(FILL)** | DP S-1 | 100 | |
| 5 | | Sampler refusal at 6.5' bgs due to gravel in sampler tip. | 6.5 ft 3.5 | DP S-2 | 100 | |
| | | | End of boring at 6.5 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B0-10N



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/21/2024 **DATE COMPLETED** 06/21/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623475 **LONGITUDE** -70.917381
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES**
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 0'-1' bgs. | 0.8 ft Brown, Silty Sand, Few Roots, Dry, SM, **(TOPSOIL)** 10.2<br>Tan, Silty Sand, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| 4.5 ft 6.5 | | | End of boring at 4.5 feet | | | |
| 5 | | | | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B0-10S



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 06/21/2024 **DATE COMPLETED** 06/21/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623424 **LONGITUDE** -70.917365
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | | Brown, Silty Sand with Gravel, Trace Roots, Dry, SM, **(TOPSOIL)** | | | |
| | | | 2.0 ft / 8.0 | | | |
| | | Analytical sample submitted from 0'-1' & 2'-3' bgs. | Tan, Silty Sand with Gravel, Trace Glass/Asphalt Debris, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | Sampler refusal at 6.5' bgs due to brick fragments in sampler tip. | | DP S-2 | 100 | |
| | | | 6.5 ft / 3.5 | | | |
| | | | End of boring at 6.5 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B0-15E



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/02/2024 **DATE COMPLETED** 07/02/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623458 **LONGITUDE** -70.917319
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1' bgs. | Brown, Poorly-Graded Sand with Silt, Trace Roots, Dry, SP-SM, **(TOPSOIL)** 1.0 ft – 9.0 | | | |
| | | | Tan to Brown, Poorly-Graded Sand with Silt, Trace Brick, Dry to Moist, SP-SM, **(FILL)** 5.0 ft – 5.0 | DP S-1 | 60 | |
| 5 | | | End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B0-15W



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/02/2024 **DATE COMPLETED** 07/02/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623439 **LONGITUDE** -70.917426
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1' bgs. | Brown, Poorly-Graded Sand with Silt, Trace Roots, Dry, SP-SM, **(TOPSOIL)** 1.0 ft – 9.0 | DP S-1 | 80 | |
| | | | Brown, Poorly-Graded Sand with Silt, Dry, SP-SM, **(FILL)** 5.0 ft – 5.0 | | | |
| 5 | | | End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B0-20E



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/02/2024 **DATE COMPLETED** 07/02/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623461 **LONGITUDE** -70.917301
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1' bgs. | Brown, Poorly-Graded Sand with Silt, Trace Roots, Dry, SP-SM, **(TOPSOIL)** 1.0 ft – 9.0 | | | |
| | | | Tan to Brown, Poorly-Graded Sand with Silt, Dry, SP-SM, **(FILL)** | DP S-1 | 60 | |
| 5 | | | 5.0 ft – 5.0 | | | |
| | | | End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B0-20W



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/02/2024 **DATE COMPLETED** 07/02/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623436 **LONGITUDE** -70.917444
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 0'-1' bgs. | Brown, Poorly-Graded Sand with Silt, Trace Roots, Dry, SP-SM, **(TOPSOIL)** 1.0 ft – 9.0 | | | |
| | | | Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 80 | |
| 5 | | | 5.0 ft – 5.0 | | | |
| | | | End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B0-10S15E



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/02/2024 **DATE COMPLETED** 07/02/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623434 **LONGITUDE** -70.917312
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1' & 2'-3' bgs. | Dark Brown, Poorly-Graded Sand with Silt, Trace Roots, Dry, SP-SM, **(TOPSOIL)** 1.0 ft – 9.0 | DP S-1 | 80 | |
| | | | Tan to Brown, Poorly-Graded Sand with Silt, Dry, SP-SM, **(FILL)** | | | |
| 5 | | | 5.0 ft – 5.0 | | | |
| | | | End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B0-10S15W



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/02/2024 **DATE COMPLETED** 07/02/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623414 **LONGITUDE** -70.917419
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1' and 2'-3' bgs. | Brown, Poorly-Graded Sand with Silt, Trace Roots, Dry, SP-SM, **(TOPSOIL)** 1.0 ft – 9.0 | | | |
| | | | Tan to Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 60 | |
| 5 | | | 5.0 ft – 5.0 | | | |
| | | | End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B0-10N15E



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/02/2024 **DATE COMPLETED** 07/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623485 **LONGITUDE** -70.917328
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1' and 2'-3' bgs. | Brown, Poorly-Graded Sand with Silt, Trace Roots, Dry, SP-SM, **(TOPSOIL)** 1.0 ft – 10.0 | | | |
| | | | Tan to Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 80 | |
| 5 | | | 5.0 ft – 6.0 | | | |
| | | | End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER B0-10N15W



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/02/2024 **DATE COMPLETED** 07/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623466 **LONGITUDE** -70.917434
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Property 1 (18 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical samples submitted from 0'-1' & 2'-3' bgs. | Brown, Poorly-Graded Sand with Silt, Trace Roots, Dry, SP-SM, **(TOPSOIL)** 1.0 ft | | | |
| | | | Tan to Brown, Poorly-Graded Sand with Silt, Trace Brick, Dry, SP-SM, **(FILL)** 10.0 | DP S-1 | 80 | |
| 5 | | | 5.0 ft 6.0 End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

# Rock Types

| Rock Name | Characteristics | Symbol |
|---|---|---|
| Claystone | Clay sized particles that are consolidated, lacking fissility. | |
| Coal | Black and shiny, can break into cubes or conchoidally. | |
| Conglomerate | Gravel sized grains and larger held together by finer material, called a breccia if clasts are angular. | |
| Limestone | Effervesses w/ diluted HCl, can be composed of clay up to gravel particles (fossils). | |
| Sandstone | Primarily sand sized particles modified w/ the descriptor fine, medium, or coarse. | |
| Shale | Clay sized particles, shale has fissility which is a horizontal sheet-like or laminated feature. | |
| Siltstone | Composed of silt, normally breaks as irregular chunks. | |

# Rock Quality Descriptions

## Weathering

**Completely Weathered:** All rock material is decomposed and/or disintegrated. The original rock structure may still be intact.

**Highly Weathered:** More than half of the rock material is decomposed. Fresh rock is present only as a discontinuous framework or as corestones.

**Moderately Weathered:** Less than half of the rock material is decomposed. Fresh rock is present at a discontinuous framework or as corestones.

**Slightly Weathered:** Discoloration or staining indicates weathering of rock material on discontinuity surfaces. Rock may be discolored and softened.

**Fresh:** No visible signs of rock material weathering.

## RQD

| Descriptor | % |
|---|---|
| Very Poor | <25 |
| Poor | 25-50 |
| Fair | 50-75 |
| Good | 75-90 |
| Excellent | >90 |

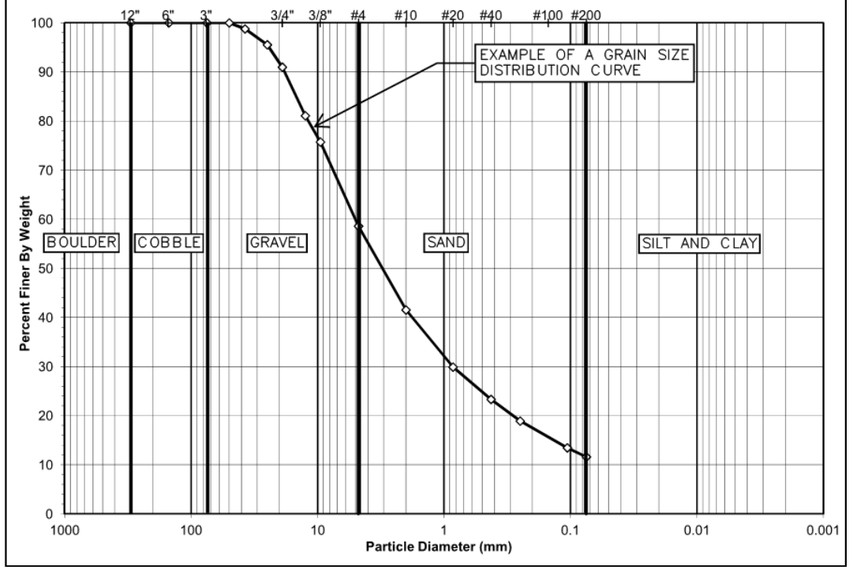
## Brokenness

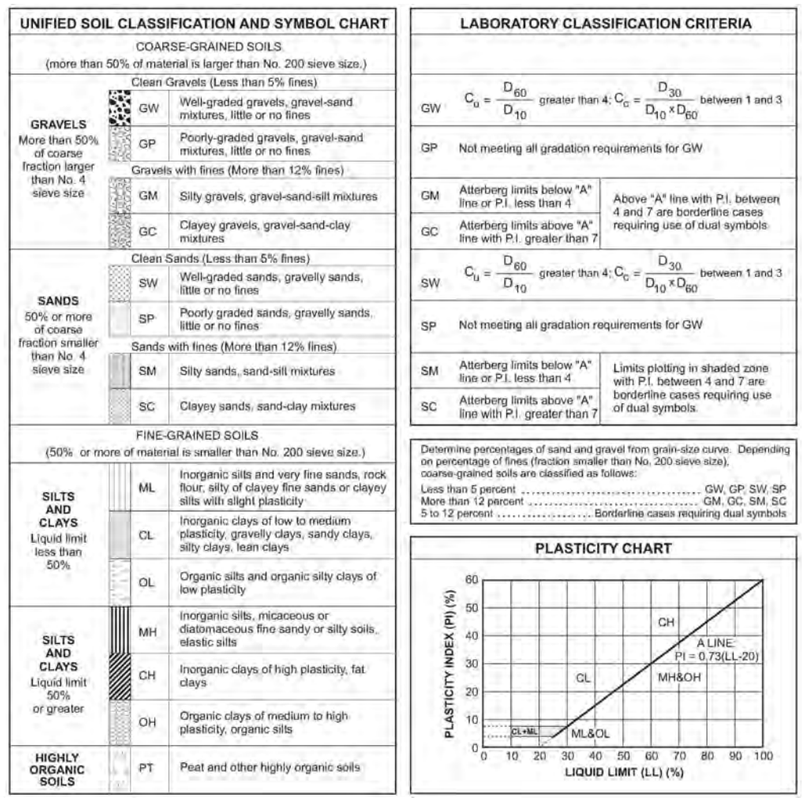
| Descriptor | Fracture Spacing (in & ft) |
|---|---|
| Very Broken | <1 (<0.08) |
| Broken | 1-3 (0.08-0.25) |
| Moderately Broken | 3-6 (0.25-0.5) |
| Slightly Broken | >6 (>0.5) |

## Rock Hardness

| Descriptor | Field Criterion | Relative Unconfined Compressive Strength |
|---|---|---|
| Very Hard | Difficult to break w/ Hammer | > 30,000 psi |
| Hard | Hand-held sample breaks w/ Hammer | 8,000 to 30,000 psi |
| Medium Hard | Cannot scrape surface w/ knife | 2,000 to 8,000 psi |
| Soft | Cutting or scraping w/ knife difficult | 500 to 2,000 psi |
| Very Soft | Can be cut w/ knife | < 500 psi |

# Grain Size Distribution Curve




# Glossary

**Alluvial Soil or Alluvium:** Soil deposited by water in a river, stream, floodplain, or delta.

**Bedrock:** Materials underlying soil or other unconsolidated surficial materials in which refusal is consistently encountered on lithified, undisturbed, natural bedrock.

**Colluvial Soil or Colluvium:** Incoherent soil on or at the base of a slope deposited by gravity or slope movement.

**Fill:** Soil derived from natural soil, rock, or processed materials that was placed by artificial methods, such as construction, waste disposal, or dumping.

**Glacial Outwash:** Soil, typically sand and gravel, deposited by glacial streams or meltwater in a preexisting valley or over a plain.

**Glacial Till:** Soil deposited by and underneath a glacier, generally consisting of a heterogeneous, unstratified mixture of clay, sand, gravel, and boulders.

**N-Value:** The blow count representation of the penetration resistance of the soil determined by the Standard Penetration Test (SPT). It is the sum of the number of blows required to drive the sampler the second and third 6-inch increments (sample depth interval of 6 to 18 inches) and is recorded in blows per foot (bpf). The N-value is considered to be an indication of the relative density of coarse-grained soils (sand and gravel) or consistency of fine-grained soils (silt and clay).

**Pocket Pen (PP):** Field penetration test performed using a hand-held penetrometer that estimates unconfined compressive strength of cohesive soil in tons per square foot (tsf).

**Recovery %:** Total length of rock core or soil sample retrieved divided by the total length of the core run or sample interval, expressed as a percentage.

**Refusal:** The depth at which greater than 50 SPT hammer blows are required to drive the sampling spoon 6 inches or less.

**Residual Soil or Residuum:** Soil derived from the physical or chemical weathering of the underlying parent bedrock, generally with N-values less than 30 and 50 bpf in cohesive and cohesionless materials, respectively.

**Rock Quality Designation (RQD):** The sum of the length of intact rock core pieces longer than 4 inches (excluding mechanical breaks) divided by the total length of the core run, expressed as a percentage.

**Shelby Tube:** A 2" to 3" diameter, thin walled sampling tube that is pushed into the soil to obtain a relatively undisturbed soil sample for geotechnical laboratory tests.

**Split Spoon Sampler:** A soil sampling tube which is driven, retrieved, and split-open lengthwise for removal and visual inspection, and testing of the soil obtained.

**Standard Penetration Test (SPT) ASTM D1586 :** Field penetration test consisting of driving a 2-inch outside diameter split-spoon sampler 18 inches using a 140-pound hammer free falling a distance of 30 inches. The number of blows required to advance the spoon through successive 6-inch increments is recorded to determine the N-value.

**Weathered Rock:** Materials derived from lithified, undisturbed, natural bedrock which are able to be sampled with a split-spoon. Cohesive and cohesionless materials generally have N-values greater than 30 and 50 bpf, respectively.

# N-Value Rating

### Fine-Grained Soils (Silt and Clay)

| Consistency | Blows/ft | PP (tsf) |
|---|---|---|
| Very Soft | 0-2 | <0.25 |
| Soft | 3-4 | 0.25-0.5 |
| Medium Stiff | 5-8 | 0.5-1 |
| Stiff | 9-15 | 1-2 |
| Very Stiff | 16-32 | 2-4 |
| Hard | >32 | >4 |

### Coarse-Grained Soils (Sand and Gravel)

| Relative Density | Blows/ft |
|---|---|
| Very Loose | 0-4 |
| Loose | 5-10 |
| Medium Dense | 11-30 |
| Dense | 31-50 |
| Very Dense | >50 |

# Unconsolidated Material

| Term | Grain Size in mm (in) | Approximate Example Size |
|---|---|---|
| Clay and Silt | <.075 | can't see grains to barely visible |
| Fine Sand | 0.075-0.4 | table salt to sugar |
| Med. Sand | 0.4-2.0 (~<1/16) | openings in a window screen |
| Coarse Sand | 2.0-4.75 (~1/16-1/8) | sidewalk salt |
| Gravel | 4.75-75 (~1/8-3) | pea to tennis ball |
| Cobble | 75-300 (3-12) | tennis ball to basketball |
| Boulder | >300 (>12) | larger than a basketball |

**Other Features** – Used to describe other identifiable, pertinent features (e.g., angularity of coarse-grained soils, organics, construction debris, etc.)

| Term | % |
|---|---|
| Trace | < 5 |
| Few | 5-15 |
| Some | 15-45 |

**Moisture Content**
Dry: Sample is dusty or obviously dry.
Moist: Anything that does not fit the definition of dry or wet.
Wet: Sample contains free water.

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Definitions of Standard Terms and Symbols

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31 Bellows Road
Raynham, MA 02767

# BORING NUMBER CEC-2-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 11/13/2023 **DATE COMPLETED** 11/13/2023
**GROUND ELEVATION** 8.90 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.622983 **LONGITUDE** -70.919441
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING 11/13/2023 8.0 ft / Elev 0.9 ft
AT END OF CORING N/A
24 HRS AFTER DRILLING N/A
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
**NOTES** Site 2 (350 S. Front St. New Bedford, MA)

| DEPTH (ft) | REMARKS | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) |
|---|---|---|---|---|---|---|---|---|
| 0 | Analytical sample submitted from 0'-6' bgs. | 0.2 ft 3" Asphalt<br>Brown, SILTY SAND WITH GRAVEL, Trace Glass, Asphalt Debris, Dry, Medium Dense, SM, **(FILL)** | 8.6 | SS S-1 | 65 | 14-5-5-7 (10) | | 0.8 |
| | | 2.5 ft Gray, Buried Concrete | 6.4 | | | | | |
| | | 3.0 ft / 3.2 ft Black, Buried Asphalt | 5.9 / 5.6 | SS S-2 | 90 | 33-32-27-15 (59) | | 0.5 |
| 5 | | Brown, Silty Sand with Gravel, Trace Glass, Brick, Asphalt Debris, Dry To Moist, Loose To Medium Dense, SM, **(FILL)** | | SS S-3 | 50 | 10-6-4-3 (10) | | 0.3 |
| | | 7.0 ft Dark Brown, Silty Sand, Trace Roots, Moist, | 1.9 | SS S-4 | 60 | 3-3-4-6 (7) | | 0.5 |
| | | 8.0 ft Loose, SM, **(FILL)** | 0.9 | | | | | |
| | | Dark Brown, Silty Sand with Gravel, Wet, Medium Dense, SM, **(OUTWASH)** | | SS S-5 | 55 | 1-3-7-9 (10) | | 0.3 |
| 10 | | 10.0 ft Light Brown, Silty Gravel with Sand, Wet, Dense, GM, **(TILL)** | -1.1 | SS S-6 | 60 | 9-17-19-20 (36) | | 0.3 |
| | | 12.0 ft Brown, Silty Sand with Gravel, Wet, Dense, SM, **(TILL)** | -3.1 | SS S-7 | -- | 18-21-28-50 (49) | | 0.4 |
| | | 14.0 ft End of boring at 14.0 feet | -5.1 | | | | | |
| 15 | | | | | | | | |
| 20 | | | -11 | | | | | |
| 25 | | | | | | | | |
| 30 | | | -21 | | | | | |

▲ SPT N VALUE ▲ 20 40 60 80
PL MC LL 20 40 60 80
□ FINES CONTENT (%) □ 20 40 60 80

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Raynham, MA 02767

# BORING NUMBER CEC-3-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 11/10/2023 **DATE COMPLETED** 11/10/2023
**GROUND ELEVATION** 8.30 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.622826 **LONGITUDE** -70.919178
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING 11/10/2023 6.0 ft / Elev 2.3 ft
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
AT END OF CORING N/A
**NOTES** Site 2 (350 S. Front St. New Bedford, MA)
24 HRS AFTER DRILLING N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) |
|---|---|---|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 0'-4' bgs. | 0.2 ft 3" Asphalt<br>Brown, Silty Sand with Gravel, Trace Brick, Dry to Moist, Loose to Dense, SM, **(FILL)** | 8.0 | SS S-1 | 55 | 9-7-4-1 (11) | | 0.2 |
| | | | | | SS S-2 | 60 | 2-2-4-13 (6) | | 0.1 |
| 5 | | | | | SS S-3 | 100 | 16-28-21-23 (49) | | 0.3 |
| | | | 6.0 ft ▽<br>Tan to Brown, Silty Gravel with Sand, Wet, Very Dense, GM, **(TILL)** | 2.3 | | | | | |
| | | | 8.0 ft<br>Brown, Silty Sand with Gravel, Wet, Dense, SM, **(TILL)** | 0.3 | SS S-4 | 60 | 22-24-28-19 (52) | | 0.3 |
| | | | | -1 | SS S-5 | 75 | 19-22-21-37 (43) | | 0.3 |
| 10 | | Augers grinding from 10-12' bgs. | 10.0 ft<br>Brown, Silty Sand with Gravel, Wet, Medium Dense to Dense, SM, **(TILL)** | -1.7 | | | | | |
| | | | | | SS S-6 | 50 | 3-5-17-17 (22) | | 0.1 |
| | | | | | SS S-7 | 75 | 22-18-19-34 (37) | | 0.2 |
| | | | 14.0 ft<br>End of boring at 14.0 feet | -5.7 | | | | | |
| 15 | | | | | | | | | |
| 20 | | | | -11 | | | | | |
| 25 | | | | | | | | | |
| 30 | | | | -21 | | | | | |

▲ SPT N VALUE ▲ 20 40 60 80
PL MC LL 20 40 60 80
□ FINES CONTENT (%) □ 20 40 60 80

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Raynham, MA 02767

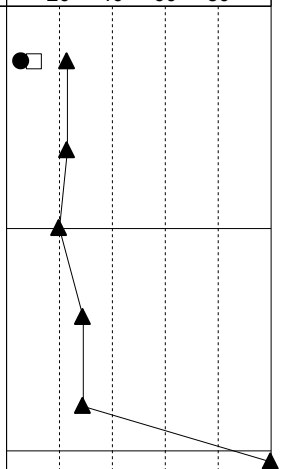
# BORING NUMBER CEC-4-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 11/10/2023 **DATE COMPLETED** 11/10/2023
**GROUND ELEVATION** 6.70 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.622690 **LONGITUDE** -70.919692
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING 11/10/2023 6.0 ft / Elev 0.7 ft
AT END OF CORING N/A
24 HRS AFTER DRILLING N/A
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
**NOTES** Site 2 (350 S. Front St. New Bedford, MA)

| DEPTH (ft) | REMARKS | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) |
|---|---|---|---|---|---|---|---|---|
| 0 | Analytical sample submitted from 0'-4' bgs. | Brown, POORLY-GRADED SAND WITH SILT AND GRAVEL, Trace to Few Brick/ Asphalt/Misc. Debris, Dry, Medium Dense, SM, **(FILL)** | 6.7 | SS S-1 | 58 | 19-11-12-14 (23) | | 0.1 |
| 2.0 ft | | Gray to Brown, Silty Sand with Gravel, Trace to Few Bricks/Asphalt/Misc. Debris, Dry to Moist, Medium Dense, SM, **(FILL)** | 4.7 | SS S-2 | 100 | 8-11-12-13 (23) | | 0.2 |
| 5 | | | | SS S-3 | 100 | 9-12-8-13 (20) | | 0.3 |
| 6.0 ft ▽ | | Brown to Gray, Silty Sand with Gravel, Wet, Medium Dense to Very Dense, SM, **(TILL)** | 0.7 | SS S-4 | 100 | 8-12-17-19 (29) | | 0.3 |
| | | | | SS S-5 | 42 | 5-11-18-30 (29) | | 0.1 |
| 10 | Split spoon refusal at 10.5' bgs | | -3 | SS S-6 | 100 | 15-50/0' | | 0.1 |
| 10.5 ft | | End of boring at 10.5 feet | -3.8 | | | | | |
| 15 | | | -13 | | | | | |
| 20 | | | | | | | | |
| 25 | | | -23 | | | | | |
| 30 | | | | | | | | |

▲ SPT N VALUE ▲
20 40 60 80
PL MC LL
20 40 60 80
□ FINES CONTENT (%) □
20 40 60 80



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Raynham, MA 02767

# BORING NUMBER CEC-5-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 11/10/2023 **DATE COMPLETED** 11/10/2023
**GROUND ELEVATION** 8.20 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.622868 **LONGITUDE** -70.919452
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING 11/10/2023 6.0 ft / Elev 2.2 ft
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
AT END OF CORING N/A
**NOTES** Site 2 (350 S. Front St. New Bedford, MA)
24 HRS AFTER DRILLING N/A

| DEPTH (ft) | REMARKS | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) |
|---|---|---|---|---|---|---|---|---|
| 0 | Analytical sample submitted from 0'-4' bgs. | Brown, SILTY SAND WITH GRAVEL, Trace Debris, Dry, Medium Dense, SM, **(FILL)** | | SS S-1 | 75 | 21-14-14-9 (28) | | 0.5 |
| 2.0 ft | | Dark Brown, Silty Sand with Gravel, Trace Debris, Dry, Medium Dense, SM, **(FILL)** | 6.2 | SS S-2 | 55 | 6-6-5-10 (11) | | 0.2 |
| 4.0 ft | Split spoon refusal on possible slab or boulder at 4' bgs. Augered through obstruction to 6' bgs. | No Recovery | 4.2 | SS S-3 | -- | 50 | | |
| 5 | | | | | | | | |
| 6.0 ft ▽ | | Gray to Brown, Silty Sand with Gravel, Wet, Medium Dense to Dense, SM, **(TILL)** | 2.2 | SS S-4 | 75 | 17-15-15-12 (30) | | 0.2 |
| | | | | SS S-5 | 100 | 6-10-15-12 (25) | | 0.2 |
| 10 | | | | | | | | |
| | | | | SS S-6 | 50 | 8-17-17-17 (34) | | 0.2 |
| | Split spoon refusal (spoon bouncing) at 13.5' bgs. | | | SS S-7 | 55 | 22-25-16 (41) | | 0.1 |
| 13.5 ft | | End of boring at 13.5 feet | -5.3 | | | | | |
| 15 | | | | | | | | |
| 20 | | | | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |

▲ SPT N VALUE ▲ 20 40 60 80
PL MC LL 20 40 60 80
□ FINES CONTENT (%) □ 20 40 60 80

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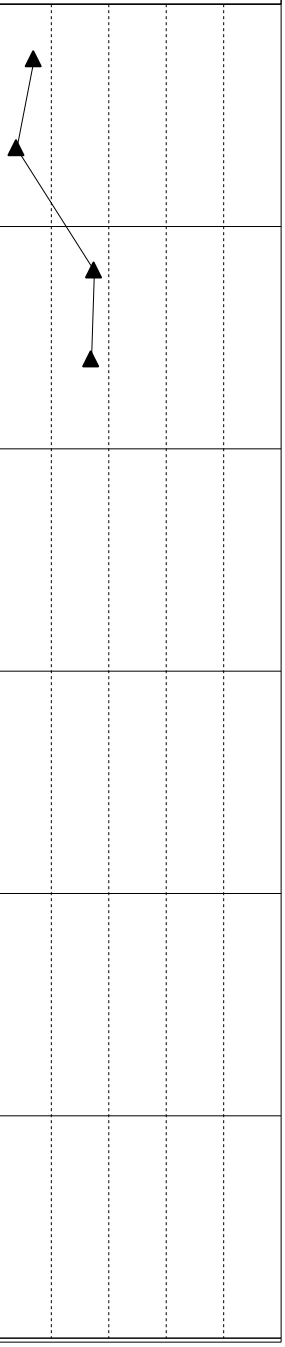
# BORING NUMBER CEC-6-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 09/19/2024 **DATE COMPLETED** 09/19/2024
**GROUND ELEVATION** 8.50 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Soil Exploration
**LATITUDE** Not obtained - radio tower interference **LONGITUDE**
**SAMPLING METHOD** Wash Rotary
**WATER LEVELS** AT END OF SOIL SAMPLING 8.5 ft / Elev 0.0 ft
AT END OF CORING 8.5 ft / Elev 0.0 ft
24 HRS AFTER DRILLING N/A
**CEC REP** D Barboza **CHECKED BY** Tony Sousa, P.E.
**NOTES** Site 2 (350 S. Front St. New Bedford, MA)

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) |
|---|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 0-4' & 5-7' bgs. | 0.2 ft 3" Asphalt 8.2<br>Brown, Silty Sand with Gravel, Trace Brick, Cinders, Dry, Medium Dense, SM, **(FILL)** | | SS S-1 | 70 | 8-8-6-5 (14) |
| | | | | | SS S-2 | 50 | 3-3-5-8 (8) |
| 5 | | | 5.5 ft 3.0<br>Tan and Gray, Silty Sand with Gravel, Moist to Wet, Medium Dense, SM, **(TILL)** | | SS S-3 | 83 | 17-18-17-17 (35) |
| | | | 9.0 ft -0.5 | | SS S-4 | 88 | 16-14-20-19 (34) |
| 10 | | | End of boring at 9.0 feet | -1 | | | |
| 15 | | | | -11 | | | |
| 20 | | | | | | | |
| 25 | | | | -21 | | | |
| 30 | | | | | | | |

▲ SPT N VALUE ▲
20 40 60 80
PL MC LL
20 40 60 80
□ FINES CONTENT (%) □
20 40 60 80



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# BORING NUMBER CEC-7-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 09/19/2024 **DATE COMPLETED** 09/19/2024
**GROUND ELEVATION** 9.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Soil X Corp
**LATITUDE** 41.622973 **LONGITUDE** -70.919285
**SAMPLING METHOD** Direct Push
**WATER LEVELS** AT END OF SOIL SAMPLING N/A
**CEC REP** D Barboza **CHECKED BY** Tony Sousa, P.E.
AT END OF CORING N/A
**NOTES** Site 2 (350 S. Front St. New Bedford, MA)
24 HRS AFTER DRILLING N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 0'-4' bgs. | 0.2 ft – 8.8: Asphalt<br>Brown, Silty Sand with Gravel, Trace Brick, Cinder, Shells, Dry, SM, **(FILL)** | DP S-1 | 100 | |
| | | | 4.0 ft – 5.0<br>Light Brown, Silty Sand with Gravel, Moist, SM, **(FILL)** | | | |
| 5 | | | 6.5 ft – 2.5<br>Tan to Gray, Silty Sand with Gravel, Moist, SM, **(FILL)** | DP S-2 | 100 | |
| | | | 8.5 ft – 0.5<br>End of boring at 8.5 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER CEC-8-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 09/23/2024 **DATE COMPLETED** 09/23/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cement
**SAMPLING CONTRACTOR** Soil Exploration
**LATITUDE** Not obtained - radio tower interference **LONGITUDE**
**SAMPLING METHOD** Direct Push
**WATER LEVELS** AT END OF SOIL SAMPLING 09/23/2024 7.5 ft / Elev 3.5 ft
**CEC REP** Tony Sousa **CHECKED BY** Tony Sousa, P.E.
AT END OF CORING N/A
**NOTES** Site 2 (350 S. Front St. New Bedford, MA)
24 HRS AFTER DRILLING N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 2-4', 7-8', & 12-14.5'. | 0.5 ft (11.0) 6" Concrete Slab | | | |
| | | | Light Brown, Poorly-Graded Sand with Silt and Gravel, Dry, SP-SM, **(FILL)** (10.5) | | | 0.1 |
| | | | 2.0 ft (9.0) Dark Brown to Black, Silty Sand with Gravel, Trace Cinders, Concrete, Dry to Wet, SM, **(FILL)** | DP S-1 | 50 | 0.0 |
| 5 | | | | | | 0.0 |
| | | Strong gasoline odor from 7 to 14.5' bgs. | | DP S-2 | 68 | 0.0 |
| | | | | | | 0.9 |
| | | | | | | 134.6 |
| | | | | | | 127.8 |
| 10 | | Increased drilling difficulty at 10' bgs. | 10.0 ft (1.0) Gray, Silty Sand, Wet, SM, **(OUTWASH)** | DP S-3 | 95 | 211.8 |
| | | | 11.0 ft (0.0) Gray, Silty Sand with Gravel, Wet, SM, **(TILL)** | | | 22.6 |
| | | | 12.0 ft (-1.0) Gray, Poorly-Graded Sand with Silt and Gravel, Wet, SP-SM, **(TILL)** | | | 46.1 |
| | | | | | | 100.7 |
| | | Probe refusal at 14.5' bgs. | | DP S-4 | 100 | 97.9 |
| 15 | | | 14.5 ft (-3.5) End of boring at 14.5 feet | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER CEC-1-4



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 11/13/2023 **DATE COMPLETED** 11/13/2023
**GROUND ELEVATION** 8.10 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.622418 **LONGITUDE** -70.919612
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING 11/13/2023 8.0 ft / Elev 0.1 ft
AT END OF CORING N/A
24 HRS AFTER DRILLING N/A
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
**NOTES** Site 2 (362 S. Front St. New Bedford, MA)

| DEPTH (ft) | REMARKS | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) |
|---|---|---|---|---|---|---|---|---|
| 0 | Analytical sample submitted from 0'-4' bgs. | 0.2 ft 3" Asphalt | 7.8 | | | | | |
| | | Brown, POORLY GRADED GRAVEL WITH SILT AND SAND, Dry, Medium Dense, GP-GM, **(FILL)** | | SS S-1 | 95 | 20-12-12-10 (24) | | 0.2 |
| | | 2.0 ft Brown to Black, Silty Sand with Gravel, Trace Brick, Dry, Medium Dense, SM, **(FILL)** | 6.1 | SS S-2 | 90 | 10-7-4-5 (11) | | 0.4 |
| 5 | | 4.0 ft Dark Brown, SILTY SAND WITH GRAVEL, Trace Brick, Dry, Loose, SM, **(FILL)** | 4.1 | SS S-3 | 75 | 4-3-6-16 (9) | | 0.3 |
| | | 6.0 ft Gray, Silty Sand with Gravel, Moist, Very Dense, SM, **(TILL)** | 2.1 | SS S-4 | 75 | 26-30-27-37 (57) | | 0.2 |
| | | 9.0 ft Light Brown, Silty Gravel with Sand, Wet, | -0.9 | SS S-5 | 55 | 16-28-36-30 (64) | | 0.1 |
| 10 | | 10.0 ft Very Dense, GM, **(TILL)** | -1.9 | | | | | |
| | | End of boring at 10.0 feet | | | | | | |
| 15 | | | -11 | | | | | |
| 20 | | | | | | | | |
| 25 | | | -21 | | | | | |
| 30 | | | | | | | | |

▲ SPT N VALUE ▲
20 40 60 80
PL MC LL
20 40 60 80
□ FINES CONTENT (%) □
20 40 60 80

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# BORING NUMBER CEC-2-4



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 11/13/2023 **DATE COMPLETED** 11/13/2023
**GROUND ELEVATION** 8.00 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.622632 **LONGITUDE** -70.919198
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING 11/13/2023 8.0 ft / Elev 0.0 ft
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
AT END OF CORING N/A
**NOTES** Site 2 (362 S. Front St. New Bedford, MA)
24 HRS AFTER DRILLING N/A

| DEPTH (ft) | REMARKS | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) |
|---|---|---|---|---|---|---|---|---|
| 0 | Analytical sample submitted from 0'-4' bgs. | Brown, Silty Sand with Gravel, Trace Asphalt/Brick/Concrete Debris, Dry, Medium Dense to Dense, SM, **(FILL)** | 8 | SS S-1 | 55 | 16-15-14-12 (29) | | 1.3 |
| | | | | SS S-2 | 70 | 20-26-16-9 (42) | | 0.4 |
| 5 | | | | SS S-3 | 55 | 7-10-7-6 (17) | | 0.4 |
| | | 7.0 ft / 1.0 — Dark Brown, Silty Sand with Gravel, Trace Roots, Moist, Loose, SM, **(FILL)** | | SS S-4 | 65 | 8-4-3-3 (7) | | 0.8 |
| | | 8.0 ft ▽ / 0.0 — Dark Brown, Slightly Organic Silty Sand with Gravel, Trace Roots, Wet, Very Loose, SM, Organic Content 1.7%, **(OUTWASH)** | | SS S-5 | 50 | 1-1-1-1 (2) | | 0.5 |
| 10 | | 10.0 ft / -2.0 — Dark Brown, Silty Sand with Gravel, Wet, Medium Dense, SM, **(OUTWASH)** | -2 | SS S-6 | 55 | 4-5-7-5 (12) | | 0.6 |
| | | 12.0 ft / -4.0 — Light Brown, Silty Gravel with Sand, Wet, Dense to Very Dense, GM, **(TILL)** | | SS S-7 | 65 | 10-18-13-27 (31) | | 1.2 |
| | Split spoon refusal at 15' bgs | 14.0 ft / -6.0 | | SS S-8 | 100 | 18-50 | | 1.2 |
| 15 | | 15.0 ft / -7.0 — End of boring at 15.0 feet | | | | | | |
| 20 | | | -12 | | | | | |
| 25 | | | | | | | | |
| 30 | | | -22 | | | | | |

▲ SPT N VALUE ▲ 20 40 60 80
PL MC LL 20 40 60 80
□ FINES CONTENT (%) □ 20 40 60 80

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# BORING NUMBER CEC-5-4



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 11/13/2023 **DATE COMPLETED** 11/13/2023
**GROUND ELEVATION** 9.00 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.621744 **LONGITUDE** -70.919514
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING: Not Encountered; AT END OF CORING: N/A; 24 HRS AFTER DRILLING: N/A
**CEC REP** D Barboza **CHECKED BY** T. Sousa, P.E.
**NOTES** Site 2 (362 S. Front St. New Bedford, MA)

| DEPTH (ft) | ELEVATION (ft) | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) |
|---|---|---|---|---|---|---|---|---|
| 0 | 9 | Analytical sample submitted from 0'-4' bgs. | Dark Brown, Silty Sand with Gravel, Trace Brick, Trace Roots, Dry, Medium Dense to Dense, SM, **(FILL)** | SS S-1 | 75 | 5-10-11-8 (21) | | 0.5 |
| | | | | SS S-2 | 85 | 7-16-32-35 (48) | | 0.4 |
| | 5.0 | | 4.0 ft | | | | | |
| 5 | 3.2 | Split spoon refusal at 5.75' bgs | Light Brown, Silty Sand with Gravel, Dry, Very Dense, SM, **(TILL)** | SS S-3 | 91 | 22-33-40-50 /0.3' (73) | | 0.2 |
| | | | 5.8 ft | | | | | |
| | | | End of boring at 5.8 feet | | | | | |
| 10 | -1 | | | | | | | |
| 15 | | | | | | | | |
| 20 | -11 | | | | | | | |
| 25 | | | | | | | | |
| 30 | -21 | | | | | | | |

▲ SPT N VALUE ▲
20 40 60 80
PL MC LL
20 40 60 80
□ FINES CONTENT (%) □
20 40 60 80

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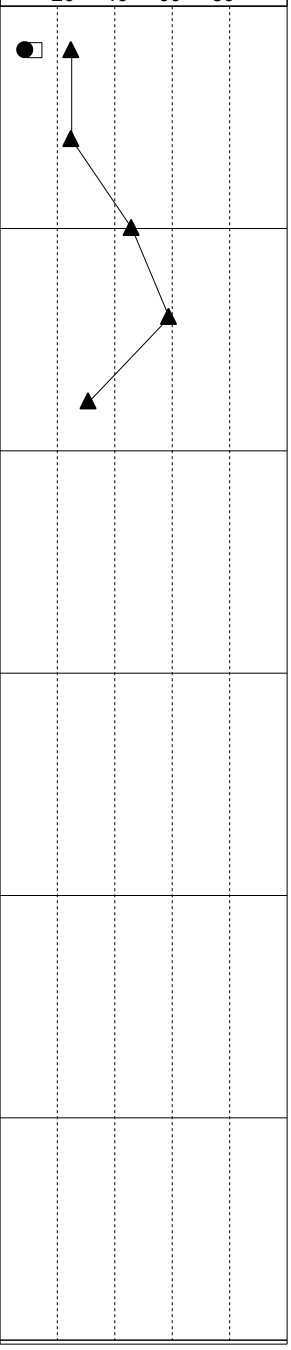
# BORING NUMBER CEC-6-4



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 11/13/2023 **DATE COMPLETED** 11/13/2023
**GROUND ELEVATION** 9.00 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.622043 **LONGITUDE** -70.919576
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger + SPT
**WATER LEVELS** AT END OF SOIL SAMPLING: Not Encountered; AT END OF CORING: N/A; 24 HRS AFTER DRILLING: N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**NOTES** Site 2 (362 S. Front St. New Bedford, MA)

| DEPTH (ft) | REMARKS | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | PID (PPM) |
|---|---|---|---|---|---|---|---|
| 0 | Analytical sample submitted from depths 0'-4' bgs. | 0.2 ft: 3" Asphalt | 8.8 | | | | |
| | | Brown, SILTY SAND WITH GRAVEL, Trace Brick, Glass, Dry, Medium Dense, SM, **(FILL)** | | SS S-1 | 55 | 18-14-11-10 (25) | 0.1 |
| | | 3.0 ft: Dark Brown, Silty Sand, Dry, Medium Dense To Very Dense, SM, **(FILL)** | 6.0 | SS S-2 | 80 | 13-12-13-25 (25) | 0.4 |
| 5 | | | | SS S-3 | 75 | 5-19-27-25 (46) | 0.2 |
| | | | | SS S-4 | 80 | 28-24-35-25 (59) | 0.6 |
| | | 8.0 ft: Light Brown, Silty Sand with Gravel, Moist, Dense, SM, **(TILL)** | 1.0 | | | | |
| | Split spoon refusal at 9.8' bgs. | | | SS S-5 | 83 | 9-14-17-50/0.3' (31) | 0.5 |
| 10 | | 9.8 ft: End of boring at 9.8 feet | -0.8 | | | | |
| 15 | | | | | | | |
| 20 | | | | | | | |
| 25 | | | | | | | |
| 30 | | | | | | | |



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# BORING NUMBER CEC-7-4



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 09/19/2024 **DATE COMPLETED** 09/19/2024
**GROUND ELEVATION** 9.00 ft **BACKFILL** with Cuttings/Cement/Bentonite
**SAMPLING CONTRACTOR** Soil Exploration
**LATITUDE** Not obtained - radio tower interference **LONGITUDE**
**SAMPLING METHOD** Direct Push
**WATER LEVELS** AT END OF SOIL SAMPLING N/A
**CEC REP** D Barboza **CHECKED BY** Tony Sousa, P.E.
AT END OF CORING N/A
**NOTES** Site 2 (362 S. Front St. New Bedford, MA)
24 HRS AFTER DRILLING N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 0'-4' & 5-10' bgs. | Dark Brown to Black, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 40 | |
| 5 | | | 5.0 ft 4.0 Tan, Silty Sand with Gravel, Dry, SM, **(TILL)** | DP S-2 | 60 | |
| 10 | | | 10.0 ft -1.0 End of boring at 10.0 feet | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER CEC-8-4



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 09/19/2024 **DATE COMPLETED** 09/19/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Soil Exploration
**LATITUDE** Not obtained - radio tower interference **LONGITUDE**
**SAMPLING METHOD** Wash Rotary
**WATER LEVELS** AT END OF SOIL SAMPLING 7.0 ft / Elev 3.0 ft
AT END OF CORING N/A
24 HRS AFTER DRILLING N/A
**CEC REP** D Barboza **CHECKED BY** Tony Sousa, P.E.
**NOTES** Site 2 (362 S. Front St. New Bedford, MA)

| DEPTH (ft) | REMARKS | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) |
|---|---|---|---|---|---|---|
| 0 | Analytical sample submitted from 0'-4' bgs. | 0.2 ft 3" Asphalt<br>Dark Gray, Silty Sand with Gravel, Trace Brick, Cinders, Dry, Medium Dense to Dense, SM, **(FILL)** | 9.8 | SS S-1 | 62 | 8-8-8-14 (16) |
| | | | | SS S-2 | 75 | 24-24-14-9 (38) |
| 5 | | 5.0 ft Tan, Silty Sand with Gravel, Dry, Medium Dense, SM, **(OUTWASH)** | 5.0 | SS S-3 | 100 | 16-14-11-8 (25) |
| | | 7.0 ft ▽ Tan, Silty Sand, Wet, Dense, SM, **(OUTWASH)** | 3.0 | | | |
| | | 8.0 ft Gray to Tan, Silty Sand with Gravel, Wet, Dense, SM, **(TILL)** | 2.0 | SS S-4 | 100 | 8-11-22-26 (33) |
| 10 | | 9.0 ft End of boring at 9.0 feet | 1.0 | | | |
| 15 | | | 0 | | | |
| 20 | | | -10 | | | |
| 25 | | | -20 | | | |
| 30 | | | | | | |

▲ SPT N VALUE ▲
20 40 60 80
PL MC LL
20 40 60 80
□ FINES CONTENT (%) □
20 40 60 80

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# BORING NUMBER CEC-9-4



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 09/19/2024 **DATE COMPLETED** 09/19/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Soil Exploration
**LATITUDE** Not obtained - radio tower interference **LONGITUDE**
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** D Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 2 (362 S. Front St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | | Brown, Silty Sand with Gravel, Dry, SM, **(TOPSOIL)** | | | |
| | | Analytical sample submitted from 2'-6' & 6'-8' bgs. | 2.0 ft — 8.0<br>Dark Brown to Black, Silty Sand with Gravel, Dry, SM, **(FILL)** | DP S-1 | 80 | |
| 5 | | | 6.0 ft — 4.0<br>Tan to Brown, Silty Sand with Gravel, Dry, SM, **(TILL)** | DP S-2 | 100 | |
| | | Sampler refusal at 8' bgs. | 8.0 ft — 2.0<br>End of boring at 8.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER CEC-10-4



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 09/19/2024 **DATE COMPLETED** 09/19/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Soil Exploration
**LATITUDE** Not obtained - radio tower interference **LONGITUDE**
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** D Barboza **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 2 (362 S. Front St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Analytical sample submitted from 0'-5' bgs. | Dark Gray, Silty Sand with Gravel/Debris, Dry, SM, **(FILL)** | | | |
| | | | 3.0 ft 7.0 | DP S-1 | 85 | |
| | | | Tan, Silty Sand, Dry, SM, **(FILL)** | | | |
| 5 | | | 5.0 ft 5.0 | | | |
| | | | Gray to Tan, Silty Sand with Gravel, Trace Brick, Dry, SM, **(FILL)** | | | |
| | | | 7.0 ft 3.0 | | | |
| | | | Tan, Silty Sand with Gravel, Dry, SM, **(TILL)** | DP S-2 | 75 | |
| 10 | | | 10.0 ft 0.0 | | | |
| | | | End of boring at 10.0 feet | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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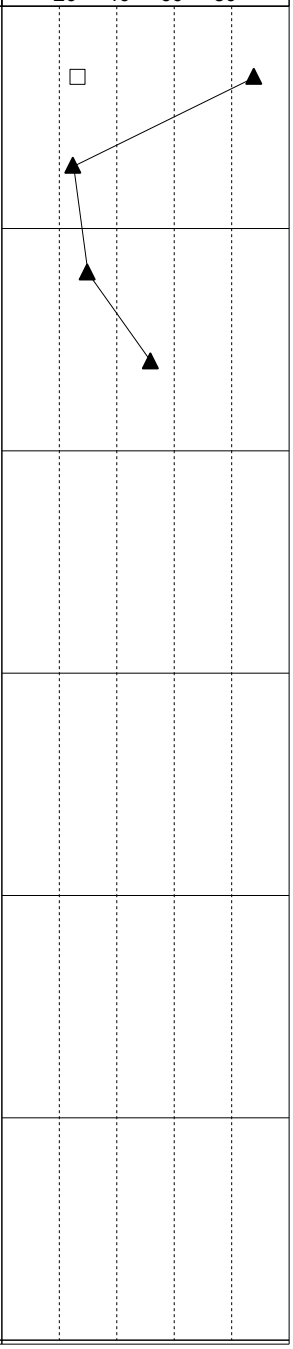
# BORING NUMBER CEC-11-4



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 09/18/2024 **DATE COMPLETED** 09/18/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cement
**SAMPLING CONTRACTOR** Soil X Corp.
**LATITUDE** Not obtained - radio tower interference **LONGITUDE**
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger
**WATER LEVELS** AT END OF SOIL SAMPLING N/A; AT END OF CORING N/A; 24 HRS AFTER DRILLING N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**NOTES** Site 2 (362 S. Front St. New Bedford, MA)

| DEPTH (ft) | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) |
|---|---|---|---|---|---|
| 0 | Gray, 5-1/4" Concrete Slab (0.5 ft) | 9.5 | | | |
| | Brown, SILTY SAND, Dry, Very Dense to Medium Dense, SM, **(FILL)** | | SS S-1 | 95 | 30-46-42-17 (88) |
| | | | SS S-2 | 60 | 14-14-11-10 (25) |
| 5 | (5.0 ft) | 5.0 | | | |
| | Tan, Poorly-Graded Sand with Silt, Dry, Dense to Very Dense, SP-SM, **(OUTWASH)** | | SS S-3 | 75 | 13-15-15-19 (30) |
| | (8.0 ft) | 2.0 | | | |
| | Brownish Tan, Silty Sand with Gravel, Moist, Very Dense, SM, **(TILL)** (9.0 ft) | 1.0 | SS S-4 | 75 | 17-25-27-25 (52) |
| | End of boring at 9.0 feet | | | | |
| 10 | | 0 | | | |
| 15 | | | | | |
| 20 | | -10 | | | |
| 25 | | | | | |
| 30 | | -20 | | | |



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# BORING NUMBER CEC-12-4



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 09/18/2024 **DATE COMPLETED** 09/18/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cement
**SAMPLING CONTRACTOR** Soil X Corp.
**LATITUDE** Not obtained - radio tower interference **LONGITUDE**
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger
**WATER LEVELS** AT END OF SOIL SAMPLING N/A; AT END OF CORING N/A; 24 HRS AFTER DRILLING N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**NOTES** Site 2 (362 S. Front St. New Bedford, MA)

| DEPTH (ft) | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) |
|---|---|---|---|---|---|
| 0 | Gray, 6-5/8" Concrete Slab | 10 | | | |
| 0.6 ft | | 9.4 | | | |
| | Tan to Brown, SILTY SAND WITH GRAVEL, Dry, Medium Dense, SM, **(FILL)** | | SS S-1 | 66 | 8-10-9-5 (19) |
| 2.6 ft | | 7.4 | | | |
| | Brown to Black, Silty Sand with Gravel, Trace Cinders, Dry, Dense, SM, **(FILL)** | | SS S-2 | 80 | 9-14-16-7 (30) |
| 5.0 ft | | 5.0 | | | |
| 5 | Orange, Silty Sand, Dry, Very Dense, SM, **(OUTWASH)** | | | | |
| 6.0 ft | | 4.0 | | | |
| | Tan to Gray, Silty Sand with Gravel, Dry, Very Dense, SM, **(TILL)** | | SS S-3 | 83 | 20-22-30-28 (52) |
| | | | SS S-4 | 60 | 50-43-38-22 (81) |
| 9.0 ft | | 1.0 | | | |
| | End of boring at 9.0 feet | | | | |
| 10 | | 0 | | | |
| 15 | | | | | |
| 20 | | -10 | | | |
| 25 | | | | | |
| 30 | | -20 | | | |

SPT N VALUE ▲ 20 40 60 80
PL MC LL 20 40 60 80
□ FINES CONTENT (%) □ 20 40 60 80

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# BORING NUMBER CEC-13-4



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 09/18/2024 **DATE COMPLETED** 09/18/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cement
**SAMPLING CONTRACTOR** Soil X Corp.
**LATITUDE** Not obtained - radio tower interference **LONGITUDE**
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger
**WATER LEVELS** AT END OF SOIL SAMPLING N/A; AT END OF CORING N/A; 24 HRS AFTER DRILLING N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E
**NOTES** Site 2 (362 S. Front St. New Bedford, MA)

| DEPTH (ft) | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | POCKET PEN. (tsf) | PID (PPM) | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 0 | 0.6 ft Gray, 5-3/4" Concrete Slab | 10 | | | | | | |
| | 9.4 Tan to Brown, SILTY SAND, Dry, Medium Dense, SM, **(FILL)** | | SS S-1 | 80 | 11-9-9-6 (18) | | | |
| | 2.6 ft 7.4 Brown to Black, Silty Sand with Gravel, Trace Ash, Cinders, Dry, Medium Dense, SM, **(FILL)** | | SS S-2 | 60 | 7-7-13-10 (20) | | | |
| 5 | 5.0 ft 5.0 Black, Silty Sand with Gravel, Dry, Loose, SM, **(FILL)** | | SS S-3 | 50 | 8-3-2-2 (5) | | | |
| | 7.5 ft 2.5 Tan, Silty Sand with Gravel, Dry, Medium Dense to Very Dense, SM, **(TILL)** | | SS S-4 | 60 | 1-10-12-16 (22) | | | |
| | 9.2 ft 0.8 End of boring at 9.2 feet | | SS S-5 | 80 | 50/0.3' | | | Split Spoon Refusal at 9.2 ft bgs. |
| 10 | | 0 | | | | | | |
| 15 | | | | | | | | |
| 20 | | -10 | | | | | | |
| 25 | | | | | | | | |
| 30 | | -20 | | | | | | |

▲ SPT N VALUE ▲ 20 40 60 80
PL MC LL 20 40 60 80
□ FINES CONTENT (%) □ 20 40 60 80

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Raynham, MA 02767

# BORING NUMBER CEC-14-4



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 09/18/2024 **DATE COMPLETED** 09/18/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cement
**SAMPLING CONTRACTOR** Soil X Corp.
**LATITUDE** Not obtained - radio tower interference **LONGITUDE**
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger
**WATER LEVELS** AT END OF SOIL SAMPLING 9.0 ft / Elev 1.0 ft
AT END OF CORING N/A
24 HRS AFTER DRILLING N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**NOTES** Site 2 (362 S. Front St. New Bedford, MA)

| DEPTH (ft) | REMARKS | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) |
|---|---|---|---|---|---|---|
| 0 | Analytical sample submitted from 0.6'-4.6' bgs. | 0.4 ft: Gray, 4-1/2" Concrete Slab | 9.6 | | | |
| | | Dark Brown, SILTY SAND, Dry, Dense, SM, **(FILL)** | | SS S-1 | 75 | 25-15-18-21 (33) |
| | | 2.6 ft: Black, Silty Sand with Gravel, Trace Ash, Dry, Dense, SM, **(FILL)** | 7.4 | | | |
| | | 3.6 ft: Gray, Poorly Graded Sand with Silt and Gravel, Trace Brick, Dry, Dense, SP-SM, **(FILL)** | 6.4 | SS S-2 | 60 | 26-31-15-12 (46) |
| 5 | | 5.0 ft: Orangish Tan, Silty Sand, Dry, Dense, SM, **(OUTWASH)** | 5.0 | SS S-3 | 75 | 17-16-21-18 (37) |
| | | 7.0 ft: Tan, Silty Sand with Gravel, Dry to Wet, Dense, SM, **(TILL)** | 3.0 | SS S-4 | 60 | 39-22-19-14 (41) |
| 10 | | 11.0 ft: End of boring at 11.0 feet | -1.0 | SS S-5 | 83 | 16-14-17-17 (31) |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

SPT N VALUE: 20 40 60 80
PL MC LL: 20 40 60 80
FINES CONTENT (%): 20 40 60 80

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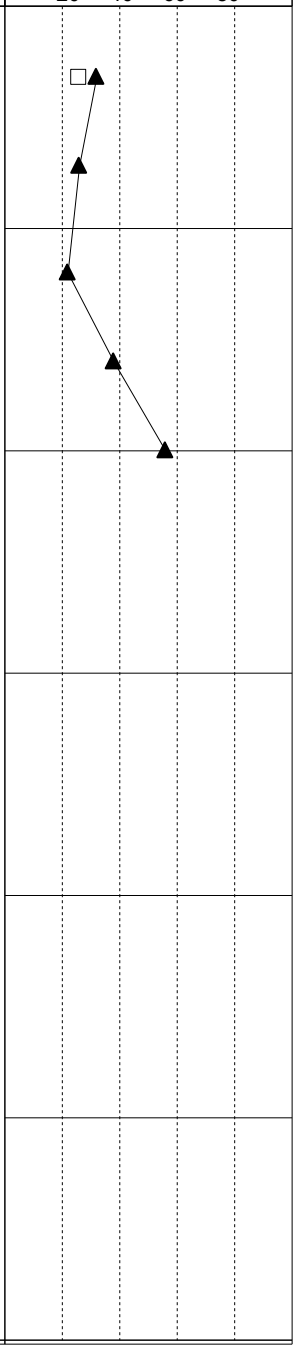
# BORING NUMBER CEC-15-4



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 09/18/2024 **DATE COMPLETED** 09/18/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cement
**SAMPLING CONTRACTOR** Soil X Corp.
**LATITUDE** Not obtained - radio tower interference **LONGITUDE**
**SAMPLING METHOD** 4-1/4-in Hollow Stem Auger
**WATER LEVELS** AT END OF SOIL SAMPLING 10.0 ft / Elev 0.0 ft
AT END OF CORING N/A
24 HRS AFTER DRILLING N/A
**CEC REP** Dave Barboza **CHECKED BY** Tony Sousa, P.E.
**NOTES** Site 2 (362 S. Front St. New Bedford, MA)

| DEPTH (ft) | MATERIAL DESCRIPTION | ELEVATION (ft) | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOWS COUNTS (N VALUES) | REMARKS |
|---|---|---|---|---|---|---|
| 0 | Gray, 6-7/8" Concrete Slab (0.6 ft) | 9.4 | | | | |
| | Dark Brown, SILTY SAND WITH GRAVEL, Dry, Dense, SM, **(FILL)** | | SS S-1 | 60 | 16-17-15-10 (32) | Analytical sample submitted from 0.6'-4.6' bgs. |
| | (2.6 ft) | 7.4 | | | | |
| | Dark Brown, Silty Sand, Dry, Medium Dense, SM, **(FILL)** | | SS S-2 | 75 | 13-15-11-10 (26) | |
| | (4.6 ft) | 5.4 | | | | |
| 5 | Dark Brown, Silty Sand with Gravel, Trace Brick, Dry, Medium Dense, SM, **(FILL)** | | | | | |
| | (6.0 ft) | 4.0 | SS S-3 | 62 | 14-13-9-8 (22) | |
| | Orange, Silty Sand, Dry, Medium Dense, SM, **(OUTWASH)** (7.0 ft) | 3.0 | | | | |
| | Tan, Poorly-Graded Sand with Silt, Dry, Dense, SP-SM, **(OUTWASH)** | | SS S-4 | 62 | 9-14-24-29 (38) | |
| | (9.0 ft) | 1.0 | | | | |
| | Tan, Silty Sand, Moist, Very Dense, SM, **(OUTWASH)** (10.0 ft) | 0.0 | SS S-5 | 100 | 29-28-28-34 (56) | |
| 10 | Black to Gray, Silty Sand with Gravel, Wet, Very Dense, SM, **(TILL)** (11.0 ft) | -1.0 | | | | |
| | End of boring at 11.0 feet | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |



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# BORING NUMBER K-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/02/2024 **DATE COMPLETED** 07/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623654 **LONGITUDE** -70.916591
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt<br>Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** 10.6 | DP S-1 | 100 | |
| 5 | | | 4.8 ft / 5.0 ft Dark Gray, Poorly-Graded Sand with Silt, Dry, SP-SM, **(FILL)** 6.2 / 6.0<br>End of boring at 5.0 feet | | | 0.0 |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER K-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/02/2024 **DATE COMPLETED** 07/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623788 **LONGITUDE** -70.916632
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 10.6<br>Brown to Dark Gray, Poorly-Graded Sand with Silt, Trace Brick, Dry, SP-SM, **(FILL)** | DP S-1 | 90 | |
| 5 | | | 5.0 ft 6.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER K-4.5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/02/2024 **DATE COMPLETED** 07/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623888 **LONGITUDE** -70.916663
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 10.6<br>Brown to Dark Brown, Poorly-Graded Sand with Silt, Dry, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 5.0 ft 6.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER L/M-4.5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/02/2024 **DATE COMPLETED** 07/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623911 **LONGITUDE** -70.916530
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 10.6<br>Tan to Brown to Gray, Poorly-Graded Sand with Silt, Trace Brick, Dry, SP-SM, **(FILL)** | DP S-1 | 80 | |
| 5 | | | 5.0 ft 6.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER L/M-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/02/2024 **DATE COMPLETED** 07/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623677 **LONGITUDE** -70.916458
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 10.6<br>Tan to Brown, Poorly-Graded Sand with Silt, Trace Brick, Dry, SP-SM, **(FILL)** | DP S-1 | 92 | |
| 5 | | | 5.0 ft 6.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER O-0.5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/02/2024 **DATE COMPLETED** 07/02/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623665 **LONGITUDE** -70.916220
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Brown, Poorly-Graded Sand with Silt, Dry, SP-SM, **(TOPSOIL)** 10.6<br>Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 80 | |
| 5 | | | 5.0 ft 6.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER Q-0.5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623696 **LONGITUDE** -70.916041
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.5 ft Brown, Poorly-Graded Sand with Silt, Dry, SP-SM, **(TOPSOIL)** 10.5<br>Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 5.0 ft 6.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER Q-7



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/02/2024 **DATE COMPLETED** 07/02/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624147 **LONGITUDE** -70.916180
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft – 9.6: Black, Asphalt<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry, SP-SM, **(FILL)** | DP S-1 | 80 | |
| | | | 3.5 ft – 6.5: Gray to White, Poorly-Graded Gravel, GP, **(FILL)** | | | |
| 5 | | | 4.8 ft – 5.2: Dark Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-2 | 100 | |
| 10 | | | 10.0 ft – 0.0: End of boring at 10.0 feet | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER S-0.5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623727 **LONGITUDE** -70.915863
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Brown, Poorly-Graded Sand with Silt, Dry, SP-SM, **(TOPSOIL)** 10.6<br>Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 5.0 ft 6.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER S-7



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/02/2024 **DATE COMPLETED** 07/02/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624178 **LONGITUDE** -70.916002
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 9.6<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry, SP-SM, **(FILL)** | DP S-1 | 90 | |
| 5 | | | 5.0 ft 5.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER U-0.5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623758 **LONGITUDE** -70.915685
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.5 ft Brown, Poorly-Graded Sand with Silt, Dry, SP-SM, **(TOPSOIL)** 10.5<br>Brown, Poorly-Graded Sand with Silt, Trace Glass, Dry, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 5.0 ft 6.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER U-7



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/02/2024 **DATE COMPLETED** 07/02/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL**
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624209 **LONGITUDE** -70.915824
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 9.6<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry, SP-SM, **(FILL)** | DP S-1 | 90 | |
| 5 | | | 5.0 ft 5.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER W-0.5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 11.00 ft **BACKFILL**
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623789 **LONGITUDE** -70.915507
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.5 ft Brown, Poorly-Graded Sand with Silt, Dry, SP-SM, **(TOPSOIL)** 10.5<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry, SP-SM, **(FILL)** | DP S-1 | 80 | |
| 5 | | | 5.0 ft 6.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER W-7



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/02/2024 **DATE COMPLETED** 07/02/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624240 **LONGITUDE** -70.915645
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 9.6<br>Brown, Poorly-Graded Sand with Silt, Dry, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 5.0 ft 5.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER Y-0.5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623914 **LONGITUDE** -70.915299
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 9.6<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 94 | |
| 5 | | | 5.0 ft 5.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER Y-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624003 **LONGITUDE** -70.915385
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 9.6<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 92 | |
| 5 | | | 5.0 ft 5.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER Y-5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL**
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624137 **LONGITUDE** -70.915426
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 9.6<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 96 | |
| 5 | | | 5.0 ft 5.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER Y-7



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 9.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624271 **LONGITUDE** -70.915467
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs | 0.4 ft Black, Asphalt 8.6<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry, SP-SM, **(FILL)** | DP S-1 | 80 | |
| 5 | | | 5.0 ft 4.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER A'-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623900 **LONGITUDE** -70.915166
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Gray, Poorly-Graded Gravel, GP, **(FILL)** 9.6<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 96 | |
| 5 | | | 5.0 ft 5.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER A'-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624034 **LONGITUDE** -70.915207
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 9.6<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 90 | |
| 5 | | | 5.0 ft 5.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER A'-5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624168 **LONGITUDE** -70.915248
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 9.6<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 94 | |
| 5 | | | 5.0 ft 5.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER A'-7



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624301 **LONGITUDE** -70.915289
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 9.6<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 98 | |
| 5 | | | 5.0 ft 5.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER C'-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623931 **LONGITUDE** -70.914988
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 9.6<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 98 | |
| 5 | | | 5.0 ft 5.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER C'-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624065 **LONGITUDE** -70.915029
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 9.6<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 96 | |
| 5 | | | 5.0 ft 5.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER C'-5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 10.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624199 **LONGITUDE** -70.915070
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 9.6<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 96 | |
| 5 | | | 5.0 ft 5.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER C'-7



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 9.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624332 **LONGITUDE** -70.915111
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 8.6<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 96 | |
| 5 | | | 5.0 ft 4.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER E'-1



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 9.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.623952 **LONGITUDE** -70.914862
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 8.6<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 98 | |
| 5 | | | 5.0 ft 4.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER E'-3



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 9.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624096 **LONGITUDE** -70.914850
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 8.6<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 96 | |
| 5 | | | 5.0 ft 4.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

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# BORING NUMBER E'-5



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 9.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624236 **LONGITUDE** -70.914847
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 8.6<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 100 | |
| 5 | | | 5.0 ft 4.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

# BORING NUMBER E'-7



**CLIENT** Foth Infrastructure & Environment, LLC
**PROJECT NAME** MassCEC Expansion
**PROJECT NUMBER** 332-344
**PROJECT LOCATION** New Bedford, MA
**DATE STARTED** 07/01/2024 **DATE COMPLETED** 07/01/2024
**GROUND ELEVATION** 9.00 ft **BACKFILL** with Cuttings
**SAMPLING CONTRACTOR** Geosearch, Inc.
**LATITUDE** 41.624363 **LONGITUDE** -70.914933
**SAMPLING METHOD** Direct Push
**WATER LEVELS** **AT END OF SOIL SAMPLING** N/A
**CEC REP** Cam Indeck **CHECKED BY** Tony Sousa, P.E.
**AT END OF CORING** N/A
**NOTES** Site 3 (4 Wright St. New Bedford, MA)
**24 HRS AFTER DRILLING** N/A

| DEPTH (ft) | GRAPHIC LOG | REMARKS | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | PID (PPM) |
|---|---|---|---|---|---|---|
| 0 | | Composite analytical sample submitted from 0'-5' bgs. | 0.4 ft Black, Asphalt 8.6<br>Tan to Brown, Poorly-Graded Sand with Silt, Dry to Moist, SP-SM, **(FILL)** | DP S-1 | 94 | |
| 5 | | | 5.0 ft 4.0<br>End of boring at 5.0 feet | | | |
| 10 | | | | | | |
| 15 | | | | | | |
| 20 | | | | | | |
| 25 | | | | | | |
| 30 | | | | | | |

# APPENDIX C

# BWSC FORMS & SIGNATORY AUTHORITY

May 8, 2024

John Hitt
General Counsel
Massachusetts Clean Energy Center
294 Washington Street, Suite 1150
Boston, Massachusetts 02108

Subject: Signatory Authority for MCP Submittals
MassCEC New Bedford Marine Commerce Terminal
New Bedford, Massachusetts
CEC Project No. 332-344

Dear Mr. Hitt:

Civil & Environmental Consultants, Inc. (CEC) is currently providing License Site Professional (LSP) services for a regulated release at the above-mentioned property in New Bedford, Massachusetts. These services include preparing reports and associated forms to be submitted to Massachusetts Department of Environmental Protection (MassDEP). With your permission, CEC can sign these forms on your behalf. For these submittals, our LSP would sign his or her name electronically as your agent. Under section 310 CMR 40.009(2) of the Massachusetts Contingency Plan (MCP), a LSP can only sign these forms if the forms are accompanied by a written declaration from their client authorizing them to act as their agent. As such, if you wish to have CEC's LSP act as your agent, please sign at the bottom of this letter indicating your authorization for CEC's LSP to sign future regulatory submittals on your behalf. As a matter of policy, a draft of each document will be sent to you for your review and authorization prior to CEC signing any document.

Following your review of the enclosed, please do not hesitate to call with any questions or comments.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

Cassia Dal Bello
Assistant Project Manager

Jonathan D. Kitchen, PG, LSP
Principal

John Hitt

General Counsel
Print Name and Title

5/13/2024
Date

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection
Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

June 12, 2024

Massachusetts Clean Energy Technology Center
Attn: John Hitt, General Counsel
294 Washington Street, Suite 1150
Boston, MA 02108

RE: NEW BEDFORD - BWSC
Release Tracking Number: **4-0050261**
MassCEC NBMCT
4 Wright Street
**NOTICE OF RESPONSIBILITY**

Sent via email only to: jhitt@masscec.com

**URGENT LEGAL MATTER: PROMPT ACTION NECESSARY**

Dear Mr. Hitt:

The Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup (MassDEP or the Department) is tasked with ensuring the cleanup of oil and hazardous material (OHM) releases pursuant to the Massachusetts Oil and Hazardous Material Release Prevention and Response Act (M.G.L. c. 21E or Chapter 21E). The law is implemented through regulations known as the Massachusetts Contingency Plan (310 CMR 40.0000 et seq. – the MCP). Both Chapter 21E and the MCP require the performance of response actions to provide for the protection of harm to health, safety, public welfare and the environment which may result from releases and/or threats of releases of OHM.

**REASON FOR THIS NOTICE**

On May 24, 2024 the MassDEP received a BWSC-103 Release Notification Form ("RNF") which indicates that a release of oil and/or hazardous material has occurred at the location referenced above. According to the RNF, the following contaminant(s) were detected in soil samples collected from the site at a concentration which exceeded the Reportable Concentrations for Soil Category 1 and 2 per 310 CMR 40.1600.

| CHEMICAL | CONCENTRATION | | RCS-1 | |
|---|---|---|---|---|
| Phenanthrene | 19.6 | mg/kg | 10 | mg/kg |
| Benzo[a]pyrene | 13.2 | mg/kg | 2 | mg/kg |
| Acenaphthylene | 2.6 | mg/kg | 2 | mg/kg |
| 1,1-Biphenyl | 13.5 | mg/kg | 0.05 | mg/kg |
| Dibenzo[A,H]Anthracene | 1.81 | mg/kg | 2 | mg/kg |

This information is available in alternate format. Please contact Melixza Esenyie at 617-626-1282.
TTY# MassRelay Service 1-800-439-2370
MassDEP Website: www.mass.gov/dep

Printed on Recycled Paper

| CHEMICAL | CONCENTRATION | RCS-2 |
|---|---|---|
| Aroclor 1254 | 11.2 mg/kg | 1 mg/kg |
| Lead | 4,060 mg/kg | 200 mg/kg |

Pursuant to 40.0315(1), this release requires notification to MassDEP within 120 days of obtaining knowledge.

M.G.L. c. 21E and the MCP require the performance of response actions to prevent harm to health, safety, public welfare and the environment which may result from this release and/or threat of release and govern the conduct of such actions. The purpose of this notice is to inform you of your legal responsibilities under State law for assessing and/or remediating the release at this property. For purposes of this NOR, the terms and phrases used herein shall have the meaning ascribed to such terms and phrases by the M.G.L. c. 21E and the MCP unless clearly indicated otherwise.

**STATUTORY LIABILITY**

MassDEP has reason to believe that you (as used in this Notice, "you" and "your" refers to Massachusetts Clean Energy Technology Center), as the current owner of the property where a release has occurred, are a Potentially Responsible Party (PRP) with liability under M.G.L. c. 21E §5, for response action costs. Section 5 makes the following parties liable to the Commonwealth of Massachusetts: current owners or operators of a site from or at which there is or has been a release/threat of release of oil or hazardous material; any person who owned or operated a site at the time hazardous material was stored or disposed of; any person who arranged for the transport, disposal, storage or treatment of hazardous material to or at a site; any person who transported hazardous material to a transport, disposal, storage or treatment site from which there is or has been a release/threat of release of such material; and any person who otherwise caused or is legally responsible for a release/threat of release of oil or hazardous material at a site.

This liability is "strict", meaning that it is not based on fault, but solely on your status as owner, operator, generator, transporter, disposer or other person specified in M.G.L. c. 21E §5. This liability is also "joint and several", meaning that you may be liable for all response action costs incurred at a disposal site regardless of the existence of any other liable parties. Pursuant to M.G.L. c. 21E and the MCP the term disposal site means anywhere OHM has come to be located.

MassDEP encourages parties with liability under M.G.L. c. 21E to take prompt and appropriate actions in response to releases and threats of release of oil and/or hazardous materials. By taking prompt action, you may significantly lower your assessment and cleanup costs and/or avoid liability for costs incurred by MassDEP in taking such actions.

You may be liable for up to three (3) times all Response Action Costs incurred by MassDEP. Response Action Costs include, without limitation, the cost of direct hours spent by MassDEP employees arranging for response actions or overseeing work performed by persons other than MassDEP or its contractors, expenses incurred by MassDEP in support of those direct hours, and payments to MassDEP's contractors. (For more detail on cost liability, see 310 CMR 40.1200.)

MassDEP may also assess interest on costs incurred at the rate of twelve percent (12%), compounded annually. To secure payment of this debt, the Commonwealth may place liens on your property in the Commonwealth. To recover the debt, the Commonwealth may foreclose on these liens or the Attorney General may bring legal action against you.

In addition to your liability for up to three (3) times all Response Action Costs incurred by MassDEP, you may also be liable to the Commonwealth for damages to natural resources caused by the release. Civil and criminal liability may also be imposed under M.G.L. c. 21E, § 11, and civil administrative penalties may be imposed under M.G.L. c. 21A, § 16 for each violation of M.G.L. c. 21E, the MCP, or any order, permit or approval issued thereunder.

By taking prompt actions you may also avoid the imposition of, the amount of or reduce certain annual compliance assurance fees payable under 310 CMR 4.00.

You should be aware that you may have claims against third parties for damages, including claims for contribution or reimbursement for the costs of cleanup. Such claims do not exist indefinitely but are governed by laws which establish the time allowed for bringing litigation. MassDEP encourages you to take any action necessary to protect any such claims you may have against third parties.

If you are a responsible party and you have reason to believe that your performance of the necessary response actions is beyond your technical, financial or legal ability, you should promptly notify the Department in writing of your inability in accordance with MGL c. 21E, subsection 5(e), and 310 CMR 40.0172. If you assert or demonstrate in compliance therewith that performing or paying for such response action is beyond your ability, subsection 5(e) provides you with a limited defense to an action by the Commonwealth for recovery of two to three times the Department's response action costs and 310 CMR 40.0172 provides you with a limited defense to the Department's assessment of civil administrative penalties.

Please refer to M.G.L. c. 21E for a complete description of potential liability.

## RELEASE ABATEMENT MEASURE PLAN

Release Abatement Measures may not be conducted until a RAM Plan is submitted pursuant to 310 CMR 40.0443.

## ADDITIONAL ACTIONS REQUIRED

You must employ or engage a Licensed Site Professional (LSP) to manage, supervise or actually perform the necessary response actions at this site. You may obtain a list of the names and addresses of these licensed professionals from the Board of Registration of Hazardous Waste Site Cleanup Professionals by calling (617) 556-1091 or visiting http://www.state.ma.us/lsp. MassDEP has Jonathan Kitchen of Civil & Environmental Consultants listed as the LSP of Record.

Unless otherwise provided by MassDEP, potentially responsible parties (PRP's) have one year from the initial date of notification to MassDEP of a release or threat of a release, pursuant to 310 CMR 40.0300, or from the date MassDEP issues a Notice of Responsibility, whichever occurs earlier, to file with MassDEP one of the following submittals: (1) a completed Tier Classification Submittal; (2) a Permanent or Temporary Solution Statement or, if applicable, (3) a Downgradient Property Status. The deadline for either of the first two

submittals for this disposal site is **May 24, 2025**. **The MCP requires that a fee of $1,470.00 be submitted to MassDEP when a Permanent Solution Statement is filed greater than 120 days from the date of notification.**

This site shall not be deemed to have had all the necessary and required response actions taken unless and until all substantial hazards presented by the release and/or threat of release have been eliminated and a level of No Significant Risk exists or has been achieved in compliance with M.G.L. c. 21E and the MCP. The MCP requires persons undertaking response actions at a Disposal Site to submit to MassDEP a Permanent Solution Statement prepared by an LSP in accordance with 310 CMR 40.1000 upon determining that a level of No Significant Risk already exists or has been achieved at the site.

If you have any questions relative to this Notice, please contact Andrew L. Jones at the letterhead address, at andy.jones@mass.gov or at 508-965-5388. All future communications regarding this release must reference the following Release Tracking Number: **4-0050261.**

Sincerely,

Andrew L. Jones, Acting Chief
Emergency Response / Release
Notification Section
Bureau of Waste Site Cleanup

J/ALJ

ec: Board of Health
Board of Selectmen
Fire Department

DEP-SERO
Data Entry

**Massachusetts Department of Environmental Protection**
*Bureau of Waste Site Cleanup*

**RELEASE NOTIFICATION FORM**

Pursuant to 310 CMR 40.0371 (Subpart C)

**BWSC103-120 DAY**

Release Tracking Number
assigned upon receipt and
review by the Department

## A. RELEASE OR THREAT OF RELEASE LOCATION:

1. Release Name/Location Aid: MASSCEC NBMCT

2. Street Address: 4 WRIGHT STREET

3. City/Town: NEW BEDFORD 4. ZIP Code: 027400000

5. Coordinates: a. Latitude: N 41.62353 b. Longitude: W 70.91712

## B. THIS FORM IS BEING USED TO:

☑ 1. Submit a **Release Notification** for a 120 day reporting requirement

**(All sections of this transmittal form must be filled out )**

## C. INFORMATION DESCRIBING THE RELEASE:

1. Date and time you obtained knowledge of the Release: 2/9/2024 (mm/dd/yyyy) Time: 09:00 (hh:mm) ☑ AM ☐ PM

2. Date and time release occurred, if known: (mm/dd/yyyy) Time: (hh:mm) ☐ AM ☐ PM

3. 120 DAY REPORTING CONDITIONS

Check all Notification Thresholds that apply to the Release:
(for more information see 310 CMR 40.0315)

☑ a. Release of Hazardous Material(s) to Soil or Groundwater Exceeding Reportable Concentration(s)

☐ b. Release of Oil to Soil Exceeding Reportable Concentration(s) and Affecting More than 2 Cubic Yards

☐ c. Release of Oil to Groundwater Exceeding Reportable Concentration(s)

☐ d. Subsurface Non-Aqueous Phase Liquid (NAPL) Equal to or Greater than 1/8 Inch (.01 feet) and Less than 1/2 Inch (.04 feet)

## C. INFORMATION DESCRIBING THE RELEASE (cont.)

4. List below the Oils (O) or Hazardous Materials (HM) that exceed their Reportable Concentration (RC) or Reportable Quantity (RQ) by the greatest amount.

☐ Check here if an amount or concentration is unknown or less than detectable.

| O or HM Released | CAS Number, if known | O or HM | Amount or Concentration | Units | RCs Exceeded, if Applicable (RCS-1, RCS-2, RCGW-1, RCGW-2) |
|---|---|---|---|---|---|
| PCB AROCLOR 1254 | 11097-69-1 | HM | 11.2 | MG/KG | RCS-2 |
| PHENANTHRENE | 85-01-8 | HM | 19.6 | MG/KG | RCS-1 |
| BENZO(A)PYRENE | 50-32-8 | HM | 13.2 | MG/KG | RCS-1 |
| BENZO(A)ANTHRACENE | 56-55-3 | HM | 13.5 | MG/KG | RCS-1 |

☑ Check here if a list of additional Oil and Hazardous Materials subject to reporting, or any other documentation relating to this notification is attached.

## D. PERSON REQUIRED TO NOTIFY:

1. Name of Organization: MASSACHUSETTS CLEAN ENERGY TECHNOLOGY CENTER

2. Contact First Name: JOHN 3. Last Name: HITT

4. Street: 294 WASHINGTON ST, SUITE 1150 5. Title: GENERAL COUNSEL

6. City/Town: BOSTON 7. State: MA 8. ZIP Code: 021080000

9. Telephone: 617-315-9364 10. Ext.: 11. Email: jhitt@masscec.com

☐ 12. Check here if attaching names and addresses of owners of properties affected by the Release, other than an owner who is submitting this Release Notification (required).

## E. RELATIONSHIP OF PERSON TO RELEASE:

☑ 1. RP or PRP ☑ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☐ e. Other RP or PRP Specify:

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Otherwise Required to Notify Specify Relationship:

## F. CERTIFICATION OF PERSON REQUIRED TO NOTIFY:

1. I, JONATHAN D KITCHEN, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By : JONATHAN D KITCHEN (Signature) 3. Title: GENERAL COUNSEL

4. For: MASSACHUSETTS CLEAN ENERGY TECHNOLOGY CENTER (Name of person or entity recorded in Section D) 5. Date : 5/24/2024 mm/dd/yyyy

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street:

8. City/Town: 9. State: 10. ZIP Code:

11. Telephone: 12. Ext.: 13. Email:

**YOU ARE SUBJECT TO ANNUAL COMPLIANCE ASSURANCE FEES FOR EACH BILLABLE YEAR FOR TIER CLASSIFIED DISPOSAL SITES. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.**

Date Stamp (DEP USE ONLY:)

**Received by DEP on 5/24/2024 1:31:35 PM**

**Massachusetts Department of Environmental Protection**
*Bureau of Waste Site Cleanup*

**BWSC 103**

**RELEASE NOTIFICATION & NOTIFICATION RETRACTION FORM**
Pursuant to 310 CMR 40.0335 and 310 CMR 40.0371 (Subpart C)

Release Tracking Number
4 - 50261

## A. RELEASE OR THREAT OF RELEASE LOCATION:

1. Release Name/Location Aid: 4 WRIGHT ST.

2. Street Address: 4 WRIGHT STREET

3. City/Town: NEW BEDFORD 4. ZIP Code: 027400000

5. Coordinates: a. Latitude: N 41.62292 b. Longitude: W 70.91958

## B. THIS FORM IS BEING USED TO: (check one)

- [x] 1. Submit a **Release Notification**
- [ ] 2. Submit a **Revised Release Notification**
- [ ] 3. Submit a **Retraction of a Previously Reported Notification** of a release or threat of release including supporting documentation required pursuant to 310 CMR 40.0335 (Section C is not required)

**(All sections of this transmittal form must be filled out unless otherwise noted above)**

## C. INFORMATION DESCRIBING THE RELEASE OR THREAT OF RELEASE (TOR):

1. Date and time of Oral Notification, if applicable: _____ (mm/dd/yyyy) Time: _____ (hh:mm) ☐ AM ☐ PM

2. Date and time you obtained knowledge of the Release or TOR: 10/1/2024 (mm/dd/yyyy) Time: 06:36 (hh:mm) ☐ AM ☑ PM

3. Date and time release or TOR occurred, if known: _____ (mm/dd/yyyy) Time: _____ (hh:mm) ☐ AM ☐ PM

Check all Notification Thresholds that apply to the Release or Threat of Release:
(for more information see 310 CMR 40.0310 - 40.0315)

### 4. 2 HOUR REPORTING CONDITIONS

- [ ] a. Sudden Release
- [ ] b. Threat of Sudden Release
- [ ] c. Oil Sheen on Surface Water
- [ ] d. Poses Imminent Hazard
- [ ] e. Could Pose Imminent Hazard
- [ ] f. Release Detected in Private Well
- [ ] g. Release to Storm Drain
- [ ] h. Sanitary Sewer Release (Imminent Hazard Only)

### 5. 72 HOUR REPORTING CONDITIONS

- [ ] a. Subsurface Non-Aqueous Phase Liquid (NAPL) Equal to or Greater than 1/2 Inch (.04 feet)
- [ ] b. Underground Storage Tank (UST) Release
- [ ] c. Threat of UST Release
- [ ] d. Release to Groundwater near Water Supply
- [ ] e. Substantial Release Migration

### 6. 120 DAY REPORTING CONDITIONS

- [x] a. Release of Hazardous Material(s) to Soil or Groundwater Exceeding Reportable Concentration(s)
- [ ] b. Release of Oil to Soil Exceeding Reportable Concentration(s) and Affecting More than 2 Cubic Yards
- [ ] c. Release of Oil to Groundwater Exceeding Reportable Concentration(s)
- [ ] d. Subsurface Non-Aqueous Phase Liquid (NAPL) Equal to or Greater than 1/8 Inch (.01 feet) and Less than 1/2 Inch (.04 feet)

## C. INFORMATION DESCRIBING THE RELEASE OR THREAT OF RELEASE (TOR): (cont.)

7. List below the Oils (O) or Hazardous Materials (HM) that exceed their Reportable Concentration (RC) or Reportable Quantity (RQ) by the greatest amount.

☐ Check here if an amount or concentration is unknown or less than detectable.

| O or HM Released | CAS Number, if known | O or HM | Amount or Concentration | Units | RCs Exceeded, if Applicable (RCS-1, RCS-2,RCGW-1, RCGW-2) |
|---|---|---|---|---|---|
| 2-METHYLNAPHTHALENE | 91-57-6 | HM | 4.47 | MG/KG | RCS-1 |
| 2,4-DINITROTOLUENE | 121-14-2 | HM | 1.13 | MG/KG | RCS-1 |
| C9-C10 AROMATICS | N/A | HM | 155 | MG/KG | RCS-1 |
| | | | | | |

☑ Check here if a list of additional Oil and Hazardous Materials subject to reporting, or any other documentation relating to this notification is attached.

## D. PERSON REQUIRED TO NOTIFY:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person notifying

2. Name of Organization: MASSACHUSETTS CLEAN ENERGY TECHNOLOGY CENTER

3. Contact First Name: JOHN 4. Last Name: HITT

5. Street: 294 WASHINGTON ST, SUITE 1150 6. Title: GENERAL COUNSEL

7. City/Town: BOSTON 8. State: MA 9. ZIP Code: 021080000

10. Telephone: 617-315-9364 11. Ext.: 12. Email: jhitt@masscec.com

☐ 13. Check here if attaching names and addresses of owners of properties affected by the Release or Threat of Release, other than an owner who is submitting this Release Notification (required).

## E. RELATIONSHIP OF PERSON TO RELEASE OR THREAT OF RELEASE: ☐ Check here to change relationship

☑ 1. RP or PRP ☑ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☐ e. Other RP or PRP Specify:

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Otherwise Required to Notify Specify Relationship:

## F. CERTIFICATION OF PERSON REQUIRED TO NOTIFY:

1. I, JONATHAN D KITCHEN, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By : JONATHAN D KITCHEN (Signature) 3. Title: GENERAL COUNSEL

4. For: MASSACHUSETTS CLEAN ENERGY TECHNOLOGY CENTER (Name of person or entity recorded in Section D) 5. Date : 1/17/2025 mm/dd/yyyy

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street:

8. City/Town: 9. State: 10. ZIP Code:

11. Telephone: 12. Ext.: 13. Email:

**YOU ARE SUBJECT TO ANNUAL COMPLIANCE ASSURANCE FEES FOR EACH BILLABLE YEAR FOR TIER CLASSIFIED DISPOSAL SITES. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.**

Date Stamp (DEP USE ONLY:)

**Received by DEP on 1/17/2025 5:27:06 PM**

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection
Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

June 12, 2024

Massachusetts Clean Energy Technology Center
Attn: John Hitt, General Counsel
294 Washington Street, Suite 1150
Boston, MA 02108

RE: NEW BEDFORD - BWSC
Release Tracking Number: **4-0050261**
MassCEC NBMCT
4 Wright Street
**NOTICE OF RESPONSIBILITY**

Sent via email only to: jhitt@masscec.com

**URGENT LEGAL MATTER: PROMPT ACTION NECESSARY**

Dear Mr. Hitt:

The Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup (MassDEP or the Department) is tasked with ensuring the cleanup of oil and hazardous material (OHM) releases pursuant to the Massachusetts Oil and Hazardous Material Release Prevention and Response Act (M.G.L. c. 21E or Chapter 21E). The law is implemented through regulations known as the Massachusetts Contingency Plan (310 CMR 40.0000 et seq. – the MCP). Both Chapter 21E and the MCP require the performance of response actions to provide for the protection of harm to health, safety, public welfare and the environment which may result from releases and/or threats of releases of OHM.

**REASON FOR THIS NOTICE**

On May 24, 2024 the MassDEP received a BWSC-103 Release Notification Form ("RNF") which indicates that a release of oil and/or hazardous material has occurred at the location referenced above. According to the RNF, the following contaminant(s) were detected in soil samples collected from the site at a concentration which exceeded the Reportable Concentrations for Soil Category 1 and 2 per 310 CMR 40.1600.

| CHEMICAL | CONCENTRATION | | RCS-1 | |
|---|---|---|---|---|
| Phenanthrene | 19.6 | mg/kg | 10 | mg/kg |
| Benzo[a]pyrene | 13.2 | mg/kg | 2 | mg/kg |
| Acenaphthylene | 2.6 | mg/kg | 2 | mg/kg |
| 1,1-Biphenyl | 13.5 | mg/kg | 0.05 | mg/kg |
| Dibenzo[A,H]Anthracene | 1.81 | mg/kg | 2 | mg/kg |

This information is available in alternate format. Please contact Melixza Esenyie at 617-626-1282.
TTY# MassRelay Service 1-800-439-2370
MassDEP Website: www.mass.gov/dep

Printed on Recycled Paper

| CHEMICAL | CONCENTRATION | RCS-2 |
|---|---|---|
| Aroclor 1254 | 11.2 mg/kg | 1 mg/kg |
| Lead | 4,060 mg/kg | 200 mg/kg |

Pursuant to 40.0315(1), this release requires notification to MassDEP within 120 days of obtaining knowledge.

M.G.L. c. 21E and the MCP require the performance of response actions to prevent harm to health, safety, public welfare and the environment which may result from this release and/or threat of release and govern the conduct of such actions. The purpose of this notice is to inform you of your legal responsibilities under State law for assessing and/or remediating the release at this property. For purposes of this NOR, the terms and phrases used herein shall have the meaning ascribed to such terms and phrases by the M.G.L. c. 21E and the MCP unless clearly indicated otherwise.

**STATUTORY LIABILITY**

MassDEP has reason to believe that you (as used in this Notice, "you" and "your" refers to Massachusetts Clean Energy Technology Center), as the current owner of the property where a release has occurred, are a Potentially Responsible Party (PRP) with liability under M.G.L. c. 21E §5, for response action costs. Section 5 makes the following parties liable to the Commonwealth of Massachusetts: current owners or operators of a site from or at which there is or has been a release/threat of release of oil or hazardous material; any person who owned or operated a site at the time hazardous material was stored or disposed of; any person who arranged for the transport, disposal, storage or treatment of hazardous material to or at a site; any person who transported hazardous material to a transport, disposal, storage or treatment site from which there is or has been a release/threat of release of such material; and any person who otherwise caused or is legally responsible for a release/threat of release of oil or hazardous material at a site.

This liability is "strict", meaning that it is not based on fault, but solely on your status as owner, operator, generator, transporter, disposer or other person specified in M.G.L. c. 21E §5. This liability is also "joint and several", meaning that you may be liable for all response action costs incurred at a disposal site regardless of the existence of any other liable parties. Pursuant to M.G.L. c. 21E and the MCP the term disposal site means anywhere OHM has come to be located.

MassDEP encourages parties with liability under M.G.L. c. 21E to take prompt and appropriate actions in response to releases and threats of release of oil and/or hazardous materials. By taking prompt action, you may significantly lower your assessment and cleanup costs and/or avoid liability for costs incurred by MassDEP in taking such actions.

You may be liable for up to three (3) times all Response Action Costs incurred by MassDEP. Response Action Costs include, without limitation, the cost of direct hours spent by MassDEP employees arranging for response actions or overseeing work performed by persons other than MassDEP or its contractors, expenses incurred by MassDEP in support of those direct hours, and payments to MassDEP's contractors. (For more detail on cost liability, see 310 CMR 40.1200.)

MassDEP may also assess interest on costs incurred at the rate of twelve percent (12%), compounded annually. To secure payment of this debt, the Commonwealth may place liens on your property in the Commonwealth. To recover the debt, the Commonwealth may foreclose on these liens or the Attorney General may bring legal action against you.

In addition to your liability for up to three (3) times all Response Action Costs incurred by MassDEP, you may also be liable to the Commonwealth for damages to natural resources caused by the release. Civil and criminal liability may also be imposed under M.G.L. c. 21E, § 11, and civil administrative penalties may be imposed under M.G.L. c. 21A, § 16 for each violation of M.G.L. c. 21E, the MCP, or any order, permit or approval issued thereunder.

By taking prompt actions you may also avoid the imposition of, the amount of or reduce certain annual compliance assurance fees payable under 310 CMR 4.00.

You should be aware that you may have claims against third parties for damages, including claims for contribution or reimbursement for the costs of cleanup. Such claims do not exist indefinitely but are governed by laws which establish the time allowed for bringing litigation. MassDEP encourages you to take any action necessary to protect any such claims you may have against third parties.

If you are a responsible party and you have reason to believe that your performance of the necessary response actions is beyond your technical, financial or legal ability, you should promptly notify the Department in writing of your inability in accordance with MGL c. 21E, subsection 5(e), and 310 CMR 40.0172. If you assert or demonstrate in compliance therewith that performing or paying for such response action is beyond your ability, subsection 5(e) provides you with a limited defense to an action by the Commonwealth for recovery of two to three times the Department's response action costs and 310 CMR 40.0172 provides you with a limited defense to the Department's assessment of civil administrative penalties.

Please refer to M.G.L. c. 21E for a complete description of potential liability.

## RELEASE ABATEMENT MEASURE PLAN

Release Abatement Measures may not be conducted until a RAM Plan is submitted pursuant to 310 CMR 40.0443.

## ADDITIONAL ACTIONS REQUIRED

You must employ or engage a Licensed Site Professional (LSP) to manage, supervise or actually perform the necessary response actions at this site. You may obtain a list of the names and addresses of these licensed professionals from the Board of Registration of Hazardous Waste Site Cleanup Professionals by calling (617) 556-1091 or visiting http://www.state.ma.us/lsp. MassDEP has Jonathan Kitchen of Civil & Environmental Consultants listed as the LSP of Record.

Unless otherwise provided by MassDEP, potentially responsible parties (PRP's) have one year from the initial date of notification to MassDEP of a release or threat of a release, pursuant to 310 CMR 40.0300, or from the date MassDEP issues a Notice of Responsibility, whichever occurs earlier, to file with MassDEP one of the following submittals: (1) a completed Tier Classification Submittal; (2) a Permanent or Temporary Solution Statement or, if applicable, (3) a Downgradient Property Status. The deadline for either of the first two

submittals for this disposal site is **May 24, 2025**. **The MCP requires that a fee of $1,470.00 be submitted to MassDEP when a Permanent Solution Statement is filed greater than 120 days from the date of notification.**

This site shall not be deemed to have had all the necessary and required response actions taken unless and until all substantial hazards presented by the release and/or threat of release have been eliminated and a level of No Significant Risk exists or has been achieved in compliance with M.G.L. c. 21E and the MCP. The MCP requires persons undertaking response actions at a Disposal Site to submit to MassDEP a Permanent Solution Statement prepared by an LSP in accordance with 310 CMR 40.1000 upon determining that a level of No Significant Risk already exists or has been achieved at the site.

If you have any questions relative to this Notice, please contact Andrew L. Jones at the letterhead address, at andy.jones@mass.gov or at 508-965-5388. All future communications regarding this release must reference the following Release Tracking Number: **4-0050261.**

Sincerely,

Andrew L. Jones, Acting Chief
Emergency Response / Release
Notification Section
Bureau of Waste Site Cleanup

J/ALJ

ec: Board of Health
Board of Selectmen
Fire Department

DEP-SERO
Data Entry

**Massachusetts Department of Environmental Protection**
*Bureau of Waste Site Cleanup*

**RELEASE NOTIFICATION FORM**

Pursuant to 310 CMR 40.0371 (Subpart C)

**BWSC103-120 DAY**

Release Tracking Number
assigned upon receipt and
review by the Department

## A. RELEASE OR THREAT OF RELEASE LOCATION:

1. Release Name/Location Aid: MASSCEC NBMCT

2. Street Address: 4 WRIGHT STREET

3. City/Town: NEW BEDFORD 4. ZIP Code: 027400000

5. Coordinates: a. Latitude: N 41.62353 b. Longitude: W 70.91712

## B. THIS FORM IS BEING USED TO:

☑ 1. Submit a **Release Notification** for a 120 day reporting requirement

**(All sections of this transmittal form must be filled out )**

## C. INFORMATION DESCRIBING THE RELEASE:

1. Date and time you obtained knowledge of the Release: 2/9/2024 (mm/dd/yyyy) Time: 09:00 (hh:mm) ☑ AM ☐ PM

2. Date and time release occurred, if known: (mm/dd/yyyy) Time: (hh:mm) ☐ AM ☐ PM

3. 120 DAY REPORTING CONDITIONS

Check all Notification Thresholds that apply to the Release:
(for more information see 310 CMR 40.0315)

☑ a. Release of Hazardous Material(s) to Soil or Groundwater Exceeding Reportable Concentration(s)

☐ b. Release of Oil to Soil Exceeding Reportable Concentration(s) and Affecting More than 2 Cubic Yards

☐ c. Release of Oil to Groundwater Exceeding Reportable Concentration(s)

☐ d. Subsurface Non-Aqueous Phase Liquid (NAPL) Equal to or Greater than 1/8 Inch (.01 feet) and Less than 1/2 Inch (.04 feet)

## C. INFORMATION DESCRIBING THE RELEASE (cont.)

4. List below the Oils (O) or Hazardous Materials (HM) that exceed their Reportable Concentration (RC) or Reportable Quantity (RQ) by the greatest amount.

☐ Check here if an amount or concentration is unknown or less than detectable.

| O or HM Released | CAS Number, if known | O or HM | Amount or Concentration | Units | RCs Exceeded, if Applicable (RCS-1, RCS-2, RCGW-1, RCGW-2) |
|---|---|---|---|---|---|
| PCB AROCLOR 1254 | 11097-69-1 | HM | 11.2 | MG/KG | RCS-2 |
| PHENANTHRENE | 85-01-8 | HM | 19.6 | MG/KG | RCS-1 |
| BENZO(A)PYRENE | 50-32-8 | HM | 13.2 | MG/KG | RCS-1 |
| BENZO(A)ANTHRACENE | 56-55-3 | HM | 13.5 | MG/KG | RCS-1 |

☑ Check here if a list of additional Oil and Hazardous Materials subject to reporting, or any other documentation relating to this notification is attached.

## D. PERSON REQUIRED TO NOTIFY:

1. Name of Organization: MASSACHUSETTS CLEAN ENERGY TECHNOLOGY CENTER

2. Contact First Name: JOHN 3. Last Name: HITT

4. Street: 294 WASHINGTON ST, SUITE 1150 5. Title: GENERAL COUNSEL

6. City/Town: BOSTON 7. State: MA 8. ZIP Code: 021080000

9. Telephone: 617-315-9364 10. Ext.: 11. Email: jhitt@masscec.com

☐ 12. Check here if attaching names and addresses of owners of properties affected by the Release, other than an owner who is submitting this Release Notification (required).

## E. RELATIONSHIP OF PERSON TO RELEASE:

☑ 1. RP or PRP ☑ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☐ e. Other RP or PRP Specify:

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Otherwise Required to Notify Specify Relationship:

## F. CERTIFICATION OF PERSON REQUIRED TO NOTIFY:

1. I, JONATHAN D KITCHEN, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By : JONATHAN D KITCHEN (Signature) 3. Title: GENERAL COUNSEL

4. For: MASSACHUSETTS CLEAN ENERGY TECHNOLOGY CENTER (Name of person or entity recorded in Section D) 5. Date : 5/24/2024 mm/dd/yyyy

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street:

8. City/Town: 9. State: 10. ZIP Code:

11. Telephone: 12. Ext.: 13. Email:

**YOU ARE SUBJECT TO ANNUAL COMPLIANCE ASSURANCE FEES FOR EACH BILLABLE YEAR FOR TIER CLASSIFIED DISPOSAL SITES. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.**

Date Stamp (DEP USE ONLY:)

**Received by DEP on 5/24/2024 1:31:35 PM**

**Massachusetts Department of Environmental Protection**
*Bureau of Waste Site Cleanup*

**BWSC 103**

**RELEASE NOTIFICATION & NOTIFICATION RETRACTION FORM**
Pursuant to 310 CMR 40.0335 and 310 CMR 40.0371 (Subpart C)

Release Tracking Number
4 - 50261

## A. RELEASE OR THREAT OF RELEASE LOCATION:

1. Release Name/Location Aid: 4 WRIGHT ST.

2. Street Address: 4 WRIGHT STREET

3. City/Town: NEW BEDFORD 4. ZIP Code: 027400000

5. Coordinates: a. Latitude: N 41.62292 b. Longitude: W 70.91958

## B. THIS FORM IS BEING USED TO: (check one)

- [x] 1. Submit a **Release Notification**
- [ ] 2. Submit a **Revised Release Notification**
- [ ] 3. Submit a **Retraction of a Previously Reported Notification** of a release or threat of release including supporting documentation required pursuant to 310 CMR 40.0335 (Section C is not required)

**(All sections of this transmittal form must be filled out unless otherwise noted above)**

## C. INFORMATION DESCRIBING THE RELEASE OR THREAT OF RELEASE (TOR):

1. Date and time of Oral Notification, if applicable: _____ (mm/dd/yyyy) Time: _____ (hh:mm) ☐ AM ☐ PM

2. Date and time you obtained knowledge of the Release or TOR: 10/1/2024 (mm/dd/yyyy) Time: 06:36 (hh:mm) ☐ AM ☑ PM

3. Date and time release or TOR occurred, if known: _____ (mm/dd/yyyy) Time: _____ (hh:mm) ☐ AM ☐ PM

Check all Notification Thresholds that apply to the Release or Threat of Release:
(for more information see 310 CMR 40.0310 - 40.0315)

### 4. 2 HOUR REPORTING CONDITIONS

- [ ] a. Sudden Release
- [ ] b. Threat of Sudden Release
- [ ] c. Oil Sheen on Surface Water
- [ ] d. Poses Imminent Hazard
- [ ] e. Could Pose Imminent Hazard
- [ ] f. Release Detected in Private Well
- [ ] g. Release to Storm Drain
- [ ] h. Sanitary Sewer Release (Imminent Hazard Only)

### 5. 72 HOUR REPORTING CONDITIONS

- [ ] a. Subsurface Non-Aqueous Phase Liquid (NAPL) Equal to or Greater than 1/2 Inch (.04 feet)
- [ ] b. Underground Storage Tank (UST) Release
- [ ] c. Threat of UST Release
- [ ] d. Release to Groundwater near Water Supply
- [ ] e. Substantial Release Migration

### 6. 120 DAY REPORTING CONDITIONS

- [x] a. Release of Hazardous Material(s) to Soil or Groundwater Exceeding Reportable Concentration(s)
- [ ] b. Release of Oil to Soil Exceeding Reportable Concentration(s) and Affecting More than 2 Cubic Yards
- [ ] c. Release of Oil to Groundwater Exceeding Reportable Concentration(s)
- [ ] d. Subsurface Non-Aqueous Phase Liquid (NAPL) Equal to or Greater than 1/8 Inch (.01 feet) and Less than 1/2 Inch (.04 feet)

## C. INFORMATION DESCRIBING THE RELEASE OR THREAT OF RELEASE (TOR): (cont.)

7. List below the Oils (O) or Hazardous Materials (HM) that exceed their Reportable Concentration (RC) or Reportable Quantity (RQ) by the greatest amount.

☐ Check here if an amount or concentration is unknown or less than detectable.

| O or HM Released | CAS Number, if known | O or HM | Amount or Concentration | Units | RCs Exceeded, if Applicable (RCS-1, RCS-2,RCGW-1, RCGW-2) |
|---|---|---|---|---|---|
| 2-METHYLNAPHTHALENE | 91-57-6 | HM | 4.47 | MG/KG | RCS-1 |
| 2,4-DINITROTOLUENE | 121-14-2 | HM | 1.13 | MG/KG | RCS-1 |
| C9-C10 AROMATICS | N/A | HM | 155 | MG/KG | RCS-1 |
| | | | | | |

☑ Check here if a list of additional Oil and Hazardous Materials subject to reporting, or any other documentation relating to this notification is attached.

## D. PERSON REQUIRED TO NOTIFY:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person notifying

2. Name of Organization: MASSACHUSETTS CLEAN ENERGY TECHNOLOGY CENTER

3. Contact First Name: JOHN 4. Last Name: HITT

5. Street: 294 WASHINGTON ST, SUITE 1150 6. Title: GENERAL COUNSEL

7. City/Town: BOSTON 8. State: MA 9. ZIP Code: 021080000

10. Telephone: 617-315-9364 11. Ext.: 12. Email: jhitt@masscec.com

☐ 13. Check here if attaching names and addresses of owners of properties affected by the Release or Threat of Release, other than an owner who is submitting this Release Notification (required).

## E. RELATIONSHIP OF PERSON TO RELEASE OR THREAT OF RELEASE: ☐ Check here to change relationship

☑ 1. RP or PRP ☑ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☐ e. Other RP or PRP Specify:

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Otherwise Required to Notify Specify Relationship:

## F. CERTIFICATION OF PERSON REQUIRED TO NOTIFY:

1. I, JONATHAN D KITCHEN, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By : JONATHAN D KITCHEN (Signature) 3. Title: GENERAL COUNSEL

4. For: MASSACHUSETTS CLEAN ENERGY TECHNOLOGY CENTER (Name of person or entity recorded in Section D) 5. Date : 1/17/2025 mm/dd/yyyy

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street:

8. City/Town: 9. State: 10. ZIP Code:

11. Telephone: 12. Ext.: 13. Email:

**YOU ARE SUBJECT TO ANNUAL COMPLIANCE ASSURANCE FEES FOR EACH BILLABLE YEAR FOR TIER CLASSIFIED DISPOSAL SITES. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.**

Date Stamp (DEP USE ONLY:)

**Received by DEP on 1/17/2025 5:27:06 PM**

# APPENDIX D

# LABORATORY REPORTS

*CERTIFICATE OF ANALYSIS*

Jon Kitchen
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC - New Bedford (318-194)**
**ESS Laboratory Work Order Number: 23K0414**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 5:53 pm, Nov 16, 2023**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

## SAMPLE RECEIPT

The following samples were received on November 10, 2023 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**The cooler temperature was not within the acceptance limit of <6°C, however, samples were delivered on ice and therefore meet regulatory criteria.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 23K0414-01 | CEC-1-1 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0414-02 | CEC-1-1 8-9.5 | Soil | 6010C, 6020A, 7471B, 8082A, 8270D |
| 23K0414-03 | CEC-4-1 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0414-04 | CEC-4-1 8-10 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0414-05 | CEC-2-1 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0414-06 | CEC-2-1 8.8-10 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0414-07 | CEC-5-1 8-10 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0414-08 | CEC-5-1-0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0414-09 | CEC-3-1 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23K0414

## PROJECT NARRATIVE

**8270D Semi-Volatile Organic Compounds**

D3K0263-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (89% @ 80-120%), Di-n-octylphthalate (90% @ 80-120%)

D3K0263-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
4-Nitrophenol (38% @ 20%)

D3K0263-TUN1 **Benzidine tailing factor >2.**

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **23K0414-01 through 23K0414-09**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | (x) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| (x) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | (x) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes (x) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: November 16, 2023
Printed Name: Laur[illegible] Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 0-4
Date Sampled: 11/09/23 12:45
Percent Solids: 78

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.59) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| **Arsenic** | **4.51** (2.30) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| **Barium** | **74.7** (2.30) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| **Beryllium** | **0.25** (0.10) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| Cadmium | ND (0.46) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| **Chromium** | **8.63** (0.92) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| **Lead** | **307** (4.59) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| **Mercury** | **1.90** (0.404) | | 7471B | | 10 | AFV | 11/13/23 20:42 | 0.63 | 40 | DK31308 |
| **Nickel** | **5.44** (2.30) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| Selenium | ND (4.59) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| Silver | ND (0.46) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| Thallium | ND (4.59) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| **Vanadium** | **10.6** (0.92) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| **Zinc** | **101** (2.30) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 0-4
Date Sampled: 11/09/23 12:45
Percent Solids: 78
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 11/16/23 12:53 | | DK31411 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 11/16/23 12:53 | | DK31411 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 11/16/23 12:53 | | DK31411 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 11/16/23 12:53 | | DK31411 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 11/16/23 12:53 | | DK31411 |
| **Aroclor 1254 [2C]** | **0.1** (0.06) | | 8082A | | 1 | 11/16/23 12:53 | | DK31411 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 11/16/23 12:53 | | DK31411 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 11/16/23 12:53 | | DK31411 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 11/16/23 12:53 | | DK31411 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *79 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *66 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 0-4
Date Sampled: 11/09/23 12:45
Percent Solids: 78
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.032) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.27) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.636) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.27) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Acetophenone | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Aniline | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Anthracene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Azobenzene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| **Benzo(a)pyrene** | **0.369** (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| **Benzo(b)fluoranthene** | **0.323** (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 0-4
Date Sampled: 11/09/23 12:45
Percent Solids: 78
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| **Chrysene** | **0.337** (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.636) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| **Fluoranthene** | **0.609** (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Fluorene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Isophorone | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Naphthalene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.27) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Phenanthrene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Phenol | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| **Pyrene** | **0.612** (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *81 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *90 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *78 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 0-4
Date Sampled: 11/09/23 12:45
Percent Solids: 78
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *84 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *67 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *75 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *70 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *100 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 8-9.5
Date Sampled: 11/09/23 12:50
Percent Solids: 20

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (9.14) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| Arsenic | ND (4.57) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| **Barium** | **22.8** (4.57) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| **Beryllium** | **0.28** (0.20) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| Cadmium | ND (0.91) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| **Chromium** | **13.2** (1.83) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| **Lead** | **13.8** (9.14) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| Mercury | ND (0.159) | | 7471B | | 1 | AFV | 11/13/23 16:44 | 0.63 | 40 | DK31308 |
| **Nickel** | **11.0** (4.57) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| Selenium | ND (9.14) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| Silver | ND (0.91) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| Thallium | ND (0.91) | | 6020A | | 1 | BJV | 11/15/23 13:46 | 5.53 | 100 | DK31051 |
| **Vanadium** | **28.1** (1.83) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| **Zinc** | **17.2** (4.57) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 8-9.5
Date Sampled: 11/09/23 12:50
Percent Solids: 20
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.3) | | 8082A | | 1 | 11/16/23 13:13 | | DK31411 |
| Aroclor 1221 | ND (0.3) | | 8082A | | 1 | 11/16/23 13:13 | | DK31411 |
| Aroclor 1232 | ND (0.3) | | 8082A | | 1 | 11/16/23 13:13 | | DK31411 |
| Aroclor 1242 | ND (0.3) | | 8082A | | 1 | 11/16/23 13:13 | | DK31411 |
| Aroclor 1248 | ND (0.3) | | 8082A | | 1 | 11/16/23 13:13 | | DK31411 |
| Aroclor 1254 | ND (0.3) | | 8082A | | 1 | 11/16/23 13:13 | | DK31411 |
| Aroclor 1260 | ND (0.3) | | 8082A | | 1 | 11/16/23 13:13 | | DK31411 |
| Aroclor 1262 | ND (0.3) | | 8082A | | 1 | 11/16/23 13:13 | | DK31411 |
| Aroclor 1268 | ND (0.3) | | 8082A | | 1 | 11/16/23 13:13 | | DK31411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *56 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *55 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 8-9.5
Date Sampled: 11/09/23 12:50
Percent Solids: 20
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.133) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (5.32) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (2.66) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (5.32) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Acenaphthene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Acenaphthylene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Acetophenone | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Aniline | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Anthracene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Azobenzene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Benzo(a)pyrene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Benzo(b)fluoranthene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 8-9.5
Date Sampled: 11/09/23 12:50
Percent Solids: 20
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Chrysene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Dibenzofuran | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Diethylphthalate | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (2.66) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Fluoranthene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Fluorene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Hexachloroethane | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Isophorone | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Naphthalene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Nitrobenzene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (5.32) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Phenanthrene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Phenol | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Pyrene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *40 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *58 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *42 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 8-9.5
Date Sampled: 11/09/23 12:50
Percent Solids: 20
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *53 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *33 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *42 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *36 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *64 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 0-4
Date Sampled: 11/09/23 14:00
Percent Solids: 89

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-03
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.05) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| Arsenic | ND (2.02) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| **Barium** | **11.9** (2.02) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| **Beryllium** | **0.16** (0.09) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| Cadmium | ND (0.40) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| **Chromium** | **4.55** (0.81) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| **Lead** | **16.3** (4.05) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| Mercury | ND (0.033) | | 7471B | | 1 | AFV | 11/13/23 16:46 | 0.67 | 40 | DK31308 |
| **Nickel** | **4.11** (2.02) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| Selenium | ND (4.05) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| Silver | ND (0.40) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| Thallium | ND (4.05) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| **Vanadium** | **6.01** (0.81) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| **Zinc** | **73.1** (2.02) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 0-4
Date Sampled: 11/09/23 14:00
Percent Solids: 89
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 11/16/23 13:32 | | DK31411 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 11/16/23 13:32 | | DK31411 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 11/16/23 13:32 | | DK31411 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 11/16/23 13:32 | | DK31411 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 11/16/23 13:32 | | DK31411 |
| Aroclor 1254 [2C] | ND (0.05) | | 8082A | | 1 | 11/16/23 13:32 | | DK31411 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 11/16/23 13:32 | | DK31411 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 11/16/23 13:32 | | DK31411 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 11/16/23 13:32 | | DK31411 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 0-4
Date Sampled: 11/09/23 14:00
Percent Solids: 89
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.07) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.536) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.07) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Acetophenone | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Aniline | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Anthracene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Azobenzene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Benzo(a)pyrene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Benzo(b)fluoranthene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 0-4
Date Sampled: 11/09/23 14:00
Percent Solids: 89
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Chrysene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.536) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Fluoranthene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Fluorene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Isophorone | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Naphthalene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.07) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Phenanthrene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Phenol | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Pyrene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *85 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *97 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *83 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 0-4
Date Sampled: 11/09/23 14:00
Percent Solids: 89
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *86 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *74 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *81 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *74 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *100 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 8-10
Date Sampled: 11/09/23 14:05
Percent Solids: 78

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (2.15) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| Arsenic | ND (1.08) | | 6010C | | 1 | CEV | 11/14/23 10:46 | 5.96 | 100 | DK31051 |
| **Barium** | **5.87** (1.08) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| **Beryllium** | **0.31** (0.05) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| Cadmium | ND (0.22) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| **Chromium** | **6.97** (0.43) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| **Lead** | **4.16** (2.15) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| Mercury | ND (0.040) | | 7471B | | 1 | AFV | 11/13/23 16:48 | 0.64 | 40 | DK31308 |
| **Nickel** | **3.62** (1.08) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| Selenium | ND (2.15) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| Silver | ND (0.43) | | 6010C | | 2 | CEV | 11/14/23 10:44 | 5.96 | 100 | DK31051 |
| Thallium | ND (2.15) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| **Vanadium** | **13.9** (0.43) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| **Zinc** | **55.2** (1.08) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 8-10
Date Sampled: 11/09/23 14:05
Percent Solids: 78
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 11/16/23 13:52 | | DK31411 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 11/16/23 13:52 | | DK31411 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 11/16/23 13:52 | | DK31411 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 11/16/23 13:52 | | DK31411 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 11/16/23 13:52 | | DK31411 |
| Aroclor 1254 | ND (0.06) | | 8082A | | 1 | 11/16/23 13:52 | | DK31411 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 11/16/23 13:52 | | DK31411 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 11/16/23 13:52 | | DK31411 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 11/16/23 13:52 | | DK31411 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *74 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *70 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 8-10
Date Sampled: 11/09/23 14:05
Percent Solids: 78
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.034) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.34) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.672) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.34) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Acetophenone | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Aniline | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Anthracene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Azobenzene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Benzo(a)pyrene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Benzo(b)fluoranthene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 8-10
Date Sampled: 11/09/23 14:05
Percent Solids: 78
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| **bis(2-Ethylhexyl)phthalate** | **0.354** (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Chrysene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.672) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Fluoranthene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Fluorene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Isophorone | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Naphthalene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.34) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Phenanthrene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Phenol | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Pyrene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *87 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *100 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *86 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 8-10
Date Sampled: 11/09/23 14:05
Percent Solids: 78
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *94 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *77 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *84 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *77 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *108 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 0-4
Date Sampled: 11/09/23 15:45
Percent Solids: 75

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-05
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.65) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| **Arsenic** | **2.59** (2.32) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| **Barium** | **44.3** (2.32) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| **Beryllium** | **0.24** (0.10) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| Cadmium | ND (0.46) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| **Chromium** | **21.2** (0.93) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| **Lead** | **310** (4.65) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| Mercury | ND (0.039) | | 7471B | | 1 | AFV | 11/13/23 16:50 | 0.68 | 40 | DK31308 |
| **Nickel** | **6.15** (2.32) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| Selenium | ND (4.65) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| Silver | ND (0.46) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| Thallium | ND (4.65) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| **Vanadium** | **14.4** (0.93) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| **Zinc** | **76.0** (2.32) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 0-4
Date Sampled: 11/09/23 15:45
Percent Solids: 75
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 11/16/23 14:11 | | DK31411 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 11/16/23 14:11 | | DK31411 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 11/16/23 14:11 | | DK31411 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 11/16/23 14:11 | | DK31411 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 11/16/23 14:11 | | DK31411 |
| Aroclor 1254 | ND (0.06) | | 8082A | | 1 | 11/16/23 14:11 | | DK31411 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 11/16/23 14:11 | | DK31411 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 11/16/23 14:11 | | DK31411 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 11/16/23 14:11 | | DK31411 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 0-4
Date Sampled: 11/09/23 15:45
Percent Solids: 75
Initial Volume: 20.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.032) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.28) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.640) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.28) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Acetophenone | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Aniline | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Anthracene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Azobenzene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Benzo(a)pyrene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Benzo(b)fluoranthene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 0-4
Date Sampled: 11/09/23 15:45
Percent Solids: 75
Initial Volume: 20.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Chrysene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.640) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Fluoranthene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Fluorene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Isophorone | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Naphthalene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.28) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Phenanthrene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Phenol | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Pyrene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *82 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *92 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *80 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 0-4
Date Sampled: 11/09/23 15:45
Percent Solids: 75
Initial Volume: 20.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *87 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *71 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *78 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *72 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *109 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 8.8-10
Date Sampled: 11/09/23 15:50
Percent Solids: 61

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-06
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (6.15) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| **Arsenic** | **3.26** (3.08) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| **Barium** | **44.2** (3.08) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| **Beryllium** | **0.42** (0.14) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| **Cadmium** | **0.84** (0.62) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| **Chromium** | **17.8** (1.23) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| **Lead** | **136** (6.15) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| **Mercury** | **1.17** (0.239) | | 7471B | | 5 | AFV | 11/13/23 20:44 | 0.68 | 40 | DK31308 |
| **Nickel** | **8.28** (3.08) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| Selenium | ND (6.15) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| Silver | ND (0.62) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| Thallium | ND (6.15) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| **Vanadium** | **17.9** (1.23) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| **Zinc** | **68.6** (3.08) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 8.8-10
Date Sampled: 11/09/23 15:50
Percent Solids: 61
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.08) | | 8082A | | 1 | 11/16/23 11:31 | | DK31625 |
| Aroclor 1221 | ND (0.08) | | 8082A | | 1 | 11/16/23 11:31 | | DK31625 |
| Aroclor 1232 | ND (0.08) | | 8082A | | 1 | 11/16/23 11:31 | | DK31625 |
| Aroclor 1242 | ND (0.08) | | 8082A | | 1 | 11/16/23 11:31 | | DK31625 |
| Aroclor 1248 | ND (0.08) | | 8082A | | 1 | 11/16/23 11:31 | | DK31625 |
| Aroclor 1254 [2C] | ND (0.08) | | 8082A | | 1 | 11/16/23 11:31 | | DK31625 |
| Aroclor 1260 | ND (0.08) | | 8082A | | 1 | 11/16/23 11:31 | | DK31625 |
| Aroclor 1262 | ND (0.08) | | 8082A | | 1 | 11/16/23 11:31 | | DK31625 |
| Aroclor 1268 | ND (0.08) | | 8082A | | 1 | 11/16/23 11:31 | | DK31625 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *76 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 8.8-10
Date Sampled: 11/09/23 15:50
Percent Solids: 61
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.041) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.63) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.817) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.63) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Acetophenone | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Aniline | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Anthracene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Azobenzene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Benzo(a)pyrene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Benzo(b)fluoranthene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 8.8-10
Date Sampled: 11/09/23 15:50
Percent Solids: 61
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Chrysene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.817) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| **Fluoranthene** | **0.425** (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Fluorene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Isophorone | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Naphthalene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.63) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Phenanthrene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Phenol | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| **Pyrene** | **0.498** (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *78 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *100 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *79 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 8.8-10
Date Sampled: 11/09/23 15:50
Percent Solids: 61
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *89 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *68 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *77 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *69 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *104 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1 8-10
Date Sampled: 11/10/23 10:05
Percent Solids: 81

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-07
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.86) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| **Arsenic** | **2.58** (2.43) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| **Barium** | **60.4** (2.43) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| **Beryllium** | **0.24** (0.11) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| Cadmium | ND (0.49) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| **Chromium** | **7.81** (0.97) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| **Lead** | **15.4** (4.86) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| **Mercury** | **0.071** (0.036) | | 7471B | | 1 | AFV | 11/13/23 17:06 | 0.69 | 40 | DK31308 |
| **Nickel** | **4.18** (2.43) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| Selenium | ND (4.86) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| Silver | ND (0.49) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| Thallium | ND (4.86) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| **Vanadium** | **14.4** (0.97) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| **Zinc** | **18.9** (2.43) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1 8-10
Date Sampled: 11/10/23 10:05
Percent Solids: 81
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 11/16/23 11:51 | | DK31625 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 11/16/23 11:51 | | DK31625 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 11/16/23 11:51 | | DK31625 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 11/16/23 11:51 | | DK31625 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 11/16/23 11:51 | | DK31625 |
| Aroclor 1254 | ND (0.06) | | 8082A | | 1 | 11/16/23 11:51 | | DK31625 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 11/16/23 11:51 | | DK31625 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 11/16/23 11:51 | | DK31625 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 11/16/23 11:51 | | DK31625 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *91 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1 8-10
Date Sampled: 11/10/23 10:05
Percent Solids: 81
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.032) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.30) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.649) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.30) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Acetophenone | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Aniline | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Anthracene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Azobenzene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Benzo(a)pyrene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Benzo(b)fluoranthene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1 8-10
Date Sampled: 11/10/23 10:05
Percent Solids: 81
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Chrysene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.649) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Fluoranthene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Fluorene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Isophorone | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Naphthalene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.30) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Phenanthrene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Phenol | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Pyrene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *83 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *105 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *80 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1 8-10
Date Sampled: 11/10/23 10:05
Percent Solids: 81
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *92 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *69 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *78 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *71 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *106 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1-0-4
Date Sampled: 11/10/23 10:00
Percent Solids: 94

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-08
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (3.80) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| Arsenic | ND (1.90) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| **Barium** | **17.7** (1.90) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| **Beryllium** | **0.15** (0.08) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| Cadmium | ND (0.38) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| **Chromium** | **7.65** (0.76) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| **Lead** | **5.94** (3.80) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| Mercury | ND (0.031) | | 7471B | | 1 | AFV | 11/13/23 17:08 | 0.69 | 40 | DK31308 |
| **Nickel** | **5.66** (1.90) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| Selenium | ND (3.80) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| Silver | ND (0.38) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| Thallium | ND (3.80) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| **Vanadium** | **6.02** (0.76) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| **Zinc** | **15.2** (1.90) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1-0-4
Date Sampled: 11/10/23 10:00
Percent Solids: 94
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 11/16/23 0:19 | | DK31412 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 11/16/23 0:19 | | DK31412 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 11/16/23 0:19 | | DK31412 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 11/16/23 0:19 | | DK31412 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 11/16/23 0:19 | | DK31412 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 11/16/23 0:19 | | DK31412 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 11/16/23 0:19 | | DK31412 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 11/16/23 0:19 | | DK31412 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 11/16/23 0:19 | | DK31412 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *76 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1-0-4
Date Sampled: 11/10/23 10:00
Percent Solids: 94
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.05) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.524) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.05) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Acetophenone | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Aniline | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Anthracene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Azobenzene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Benzo(a)pyrene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Benzo(b)fluoranthene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1-0-4
Date Sampled: 11/10/23 10:00
Percent Solids: 94
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Chrysene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.524) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Fluoranthene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Fluorene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Isophorone | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Naphthalene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.05) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Phenanthrene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Phenol | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Pyrene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *83 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *90 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *86 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1-0-4
Date Sampled: 11/10/23 10:00
Percent Solids: 94
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *88 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *74 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *75 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *78 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *113 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-1 0-4
Date Sampled: 11/10/23 08:00
Percent Solids: 89

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-09
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (3.80) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| Arsenic | ND (1.90) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| **Barium** | **23.1** (1.90) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| **Beryllium** | **0.17** (0.08) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| Cadmium | ND (0.38) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| **Chromium** | **12.9** (0.76) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| **Lead** | **28.6** (3.80) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| **Mercury** | **0.072** (0.035) | | 7471B | | 1 | AFV | 11/13/23 17:11 | 0.64 | 40 | DK31308 |
| **Nickel** | **5.82** (1.90) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| Selenium | ND (3.80) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| Silver | ND (0.38) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| Thallium | ND (3.80) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| **Vanadium** | **9.31** (0.76) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| **Zinc** | **41.0** (1.90) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-1 0-4
Date Sampled: 11/10/23 08:00
Percent Solids: 89
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 11/16/23 12:11 | | DK31625 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 11/16/23 12:11 | | DK31625 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 11/16/23 12:11 | | DK31625 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 11/16/23 12:11 | | DK31625 |
| **Aroclor 1248** | **0.2** (0.05) | | 8082A | | 1 | 11/16/23 12:11 | | DK31625 |
| **Aroclor 1254** | **0.6** (0.05) | | 8082A | | 1 | 11/16/23 12:11 | | DK31625 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 11/16/23 12:11 | | DK31625 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 11/16/23 12:11 | | DK31625 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 11/16/23 12:11 | | DK31625 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *81 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-1 0-4
Date Sampled: 11/10/23 08:00
Percent Solids: 89
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.029) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.18) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.589) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.18) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Acetophenone | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Aniline | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Anthracene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Azobenzene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Benzo(a)pyrene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Benzo(b)fluoranthene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-1 0-4
Date Sampled: 11/10/23 08:00
Percent Solids: 89
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Chrysene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.589) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Fluoranthene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Fluorene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Isophorone | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Naphthalene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.18) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Phenanthrene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Phenol | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| **Pyrene** | **0.334** (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *77 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *96 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *75 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-1 0-4
Date Sampled: 11/10/23 08:00
Percent Solids: 89
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *83 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *66 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *69 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *66 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *106 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DK31051 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Antimony | ND | 4.42 | mg/kg wet | | | | | | | |
| Arsenic | ND | 2.21 | mg/kg wet | | | | | | | |
| Barium | ND | 2.21 | mg/kg wet | | | | | | | |
| Beryllium | ND | 0.10 | mg/kg wet | | | | | | | |
| Cadmium | ND | 0.44 | mg/kg wet | | | | | | | |
| Chromium | ND | 0.88 | mg/kg wet | | | | | | | |
| Lead | ND | 4.42 | mg/kg wet | | | | | | | |
| Nickel | ND | 2.21 | mg/kg wet | | | | | | | |
| Selenium | ND | 4.42 | mg/kg wet | | | | | | | |
| Silver | ND | 0.44 | mg/kg wet | | | | | | | |
| Thallium | ND | 4.42 | mg/kg wet | | | | | | | |
| Vanadium | ND | 0.88 | mg/kg wet | | | | | | | |
| Zinc | ND | 2.21 | mg/kg wet | | | | | | | |
| **Blank** | | | | | | | | | | |
| Thallium | ND | 0.50 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Antimony | 35.8 | 14.5 | mg/kg wet | 54.20 | | 66 | 40-160 | | | |
| Arsenic | 236 | 7.25 | mg/kg wet | 258.0 | | 92 | 80-120 | | | |
| Barium | 736 | 7.25 | mg/kg wet | 809.0 | | 91 | 80-120 | | | |
| Beryllium | 45.0 | 0.32 | mg/kg wet | 48.50 | | 93 | 80-120 | | | |
| Cadmium | 287 | 1.45 | mg/kg wet | 321.0 | | 90 | 80-120 | | | |
| Chromium | 113 | 2.90 | mg/kg wet | 133.0 | | 85 | 80-120 | | | |
| Lead | 95.3 | 14.5 | mg/kg wet | 102.0 | | 93 | 80-120 | | | |
| Nickel | 132 | 7.25 | mg/kg wet | 137.0 | | 96 | 80-120 | | | |
| Selenium | 49.1 | 14.5 | mg/kg wet | 49.40 | | 99 | 80-120 | | | |
| Silver | 21.4 | 1.45 | mg/kg wet | 22.70 | | 94 | 80-120 | | | |
| Thallium | 76.5 | 14.5 | mg/kg wet | 81.40 | | 94 | 80-120 | | | |
| Vanadium | 90.8 | 2.90 | mg/kg wet | 108.0 | | 84 | 55-145 | | | |
| Zinc | 485 | 7.25 | mg/kg wet | 540.0 | | 90 | 80-120 | | | |
| **LCS** | | | | | | | | | | |
| Thallium | 84.5 | 7.25 | mg/kg wet | 81.40 | | 104 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Antimony | 32.4 | 15.9 | mg/kg wet | 54.20 | | 60 | 40-160 | 10 | 30 | |
| Arsenic | 220 | 7.94 | mg/kg wet | 258.0 | | 85 | 80-120 | 7 | 30 | |
| Barium | 730 | 7.94 | mg/kg wet | 809.0 | | 90 | 80-120 | 0.8 | 30 | |
| Beryllium | 42.3 | 0.35 | mg/kg wet | 48.50 | | 87 | 80-120 | 6 | 20 | |
| Cadmium | 270 | 1.59 | mg/kg wet | 321.0 | | 84 | 80-120 | 6 | 30 | |
| Chromium | 106 | 3.17 | mg/kg wet | 133.0 | | 80 | 80-120 | 6 | 30 | |
| Lead | 88.3 | 15.9 | mg/kg wet | 102.0 | | 87 | 80-120 | 8 | 20 | |
| Nickel | 124 | 7.94 | mg/kg wet | 137.0 | | 91 | 80-120 | 6 | 30 | |
| Selenium | 43.8 | 15.9 | mg/kg wet | 49.40 | | 89 | 80-120 | 11 | 30 | |
| Silver | 19.9 | 1.59 | mg/kg wet | 22.70 | | 88 | 80-120 | 7 | 30 | |
| Thallium | 70.6 | 15.9 | mg/kg wet | 81.40 | | 87 | 80-120 | 8 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DK31051 - 3050B** | | | | | | | | | | |
| Vanadium | 83.8 | 3.17 | mg/kg wet | 108.0 | | 78 | 55-145 | 8 | 30 | |
| Zinc | 453 | 7.94 | mg/kg wet | 540.0 | | 84 | 80-120 | 7 | 30 | |
| **LCS Dup** | | | | | | | | | | |
| Thallium | 80.7 | 7.94 | mg/kg wet | 81.40 | | 99 | 80-120 | 5 | 30 | |
| **Batch DK31308 - 7471B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Mercury | ND | 0.030 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Mercury | 8.98 | 3.25 | mg/kg wet | 17.10 | | 52 | 33.1-86.55 | | | |
| **LCS Dup** | | | | | | | | | | |
| Mercury | 9.94 | 3.00 | mg/kg wet | 17.10 | | 58 | 33.1-86.55 | 10 | 30 | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DK31411 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0216* | | mg/kg wet | *0.02500* | | *86* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0227* | | mg/kg wet | *0.02500* | | *91* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0226* | | mg/kg wet | *0.02500* | | *91* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.3 | 0.05 | mg/kg wet | 0.5000 | | 67 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.3 | 0.05 | mg/kg wet | 0.5000 | | 70 | 40-140 | | | |
| Aroclor 1260 | 0.3 | 0.05 | mg/kg wet | 0.5000 | | 64 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.3 | 0.05 | mg/kg wet | 0.5000 | | 66 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DK31411 - 3540C** | | | | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0185* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0176* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0187* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 86 | 40-140 | 25 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | 25 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 86 | 40-140 | 29 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 87 | 40-140 | 28 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0213* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0227* | | mg/kg wet | *0.02500* | | *91* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0212* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0224* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| **Batch DK31412 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0188* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DK31412 - 3540C** | | | | | | | | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0201* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | 0.2 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | 0.7 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | 1 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 1 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0199* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0201* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **Batch DK31625 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0226* | | mg/kg wet | *0.02500* | | *90* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0223* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0223* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 86 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DK31625 - 3540C** | | | | | | | | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0212* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0209* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0212* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 86 | 40-140 | 0.2 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 1 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | 0.4 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | 1 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0212* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0211* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0211* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0214* | | mg/kg wet | *0.02500* | | *86* | *30-150* | | | |
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.33* | | mg/kg wet | *2.500* | | *93* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.54* | | mg/kg wet | *3.750* | | *95* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.30* | | mg/kg wet | *3.750* | | *88* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.30* | | mg/kg wet | *2.500* | | *92* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.71* | | mg/kg wet | *3.750* | | *72* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.22* | | mg/kg wet | *2.500* | | *89* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.08* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.99* | | mg/kg wet | *2.500* | | *120* | *30-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.03 | 0.025 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8270D Semi-Volatile Organic Compounds | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| 1,2-Dichlorobenzene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| 1,3-Dichlorobenzene | 2.06 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 30-130 | | | |
| 2,4-Dichlorophenol | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 30-130 | | | |
| 2,4-Dimethylphenol | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 30-130 | | | |
| 2,4-Dinitrophenol | 1.47 | 1.00 | mg/kg wet | 2.500 | | 59 | 30-130 | | | |
| 2,4-Dinitrotoluene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| 2-Chloronaphthalene | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| 2-Chlorophenol | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 30-130 | | | |
| 2-Methylnaphthalene | 1.84 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| 2-Methylphenol | 1.80 | 0.250 | mg/kg wet | 2.500 | | 72 | 30-130 | | | |
| 2-Nitrophenol | 1.89 | 0.500 | mg/kg wet | 2.500 | | 76 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| 3+4-Methylphenol | 3.64 | 0.250 | mg/kg wet | 5.000 | | 73 | 30-130 | | | |
| 4-Bromophenyl-phenylether | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| 4-Chloroaniline | 1.49 | 0.250 | mg/kg wet | 2.500 | | 60 | 40-140 | | | |
| 4-Nitrophenol | 1.42 | 1.00 | mg/kg wet | 2.500 | | 57 | 30-130 | | | |
| Acenaphthene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Acenaphthylene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Acetophenone | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Aniline | 1.29 | 0.250 | mg/kg wet | 2.500 | | 52 | 40-140 | | | |
| Anthracene | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Azobenzene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Benzo(a)anthracene | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Benzo(a)pyrene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.64 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 1.63 | 0.250 | mg/kg wet | 2.500 | | 65 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 1.86 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.67 | 0.250 | mg/kg wet | 2.500 | | 67 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Butylbenzylphthalate | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Chrysene | 2.34 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| Dibenzofuran | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Diethylphthalate | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Dimethylphthalate | 2.29 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Di-n-butylphthalate | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Di-n-octylphthalate | 2.03 | 0.500 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Fluoranthene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| Fluorene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Hexachlorobenzene | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| Hexachlorobutadiene | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Hexachloroethane | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Isophorone | 1.56 | 0.250 | mg/kg wet | 2.500 | | 62 | 40-140 | | | |
| Naphthalene | 1.77 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Nitrobenzene | 1.66 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | | | |
| N-Nitrosodimethylamine | 1.64 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | | | |
| Pentachlorophenol | 1.73 | 1.00 | mg/kg wet | 2.500 | | 69 | 30-130 | | | |
| Phenanthrene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Phenol | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 30-130 | | | |
| Pyrene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.17* | | mg/kg wet | *2.500* | | *87* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.97* | | mg/kg wet | *3.750* | | *106* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.17* | | mg/kg wet | *3.750* | | *85* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.30* | | mg/kg wet | *2.500* | | *92* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.85* | | mg/kg wet | *3.750* | | *76* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.84* | | mg/kg wet | *2.500* | | *74* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *2.89* | | mg/kg wet | *3.750* | | *77* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.64* | | mg/kg wet | *2.500* | | *106* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.16 | 0.025 | mg/kg wet | 2.500 | | 86 | 40-140 | 6 | 30 | |
| 1,2,4-Trichlorobenzene | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 5 | 30 | |
| 1,2-Dichlorobenzene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 2 | 30 | |
| 1,3-Dichlorobenzene | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 0.4 | 30 | |
| 1,4-Dichlorobenzene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 0.4 | 30 | |
| 2,4,5-Trichlorophenol | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 30-130 | 7 | 30 | |
| 2,4,6-Trichlorophenol | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 30-130 | 6 | 30 | |
| 2,4-Dichlorophenol | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 30-130 | 5 | 30 | |
| 2,4-Dimethylphenol | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 30-130 | 5 | 30 | |
| 2,4-Dinitrophenol | 1.70 | 1.00 | mg/kg wet | 2.500 | | 68 | 30-130 | 15 | 30 | |
| 2,4-Dinitrotoluene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 8 | 30 | |
| 2,6-Dinitrotoluene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 7 | 30 | |
| 2-Chloronaphthalene | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 2 | 30 | |
| 2-Chlorophenol | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 30-130 | 0.2 | 30 | |
| 2-Methylnaphthalene | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | 3 | 30 | |
| 2-Methylphenol | 1.79 | 0.250 | mg/kg wet | 2.500 | | 71 | 30-130 | 0.9 | 30 | |
| 2-Nitrophenol | 1.99 | 0.500 | mg/kg wet | 2.500 | | 79 | 30-130 | 5 | 30 | |
| 3,3´-Dichlorobenzidine | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 8 | 30 | |
| 3+4-Methylphenol | 3.62 | 0.250 | mg/kg wet | 5.000 | | 72 | 30-130 | 0.5 | 30 | |
| 4-Bromophenyl-phenylether | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | 9 | 30 | |
| 4-Chloroaniline | 1.50 | 0.250 | mg/kg wet | 2.500 | | 60 | 40-140 | 1 | 30 | |
| 4-Nitrophenol | 1.40 | 1.00 | mg/kg wet | 2.500 | | 56 | 30-130 | 2 | 30 | |
| Acenaphthene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 5 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| Acenaphthylene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 5 | 30 | |
| Acetophenone | 1.71 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | 4 | 30 | |
| Aniline | 1.36 | 0.250 | mg/kg wet | 2.500 | | 55 | 40-140 | 5 | 30 | |
| Anthracene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 2 | 30 | |
| Azobenzene | 1.86 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | 7 | 30 | |
| Benzo(a)anthracene | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 6 | 30 | |
| Benzo(a)pyrene | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 7 | 30 | |
| Benzo(b)fluoranthene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 6 | 30 | |
| Benzo(g,h,i)perylene | 2.89 | 0.250 | mg/kg wet | 2.500 | | 116 | 40-140 | 9 | 30 | |
| Benzo(k)fluoranthene | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 7 | 30 | |
| bis(2-Chloroethoxy)methane | 1.63 | 0.250 | mg/kg wet | 2.500 | | 65 | 40-140 | 0.03 | 30 | |
| bis(2-Chloroethyl)ether | 1.67 | 0.250 | mg/kg wet | 2.500 | | 67 | 40-140 | 11 | 30 | |
| bis(2-chloroisopropyl)Ether | 1.64 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | 2 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 3 | 30 | |
| Butylbenzylphthalate | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 4 | 30 | |
| Chrysene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 6 | 30 | |
| Dibenzo(a,h)Anthracene | 2.82 | 0.250 | mg/kg wet | 2.500 | | 113 | 40-140 | 7 | 30 | |
| Dibenzofuran | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 4 | 30 | |
| Diethylphthalate | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 1 | 30 | |
| Dimethylphthalate | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 4 | 30 | |
| Di-n-butylphthalate | 2.26 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 0.9 | 30 | |
| Di-n-octylphthalate | 2.12 | 0.500 | mg/kg wet | 2.500 | | 85 | 40-140 | 4 | 30 | |
| Fluoranthene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 2 | 30 | |
| Fluorene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 3 | 30 | |
| Hexachlorobenzene | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 3 | 30 | |
| Hexachlorobutadiene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 4 | 30 | |
| Hexachloroethane | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 3 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 6 | 30 | |
| Isophorone | 1.54 | 0.250 | mg/kg wet | 2.500 | | 62 | 40-140 | 1 | 30 | |
| Naphthalene | 1.81 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | 2 | 30 | |
| Nitrobenzene | 1.65 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | 0.3 | 30 | |
| N-Nitrosodimethylamine | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | 16 | 30 | |
| Pentachlorophenol | 1.81 | 1.00 | mg/kg wet | 2.500 | | 72 | 30-130 | 4 | 30 | |
| Phenanthrene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 3 | 30 | |
| Phenol | 1.61 | 0.250 | mg/kg wet | 2.500 | | 65 | 30-130 | 13 | 30 | |
| Pyrene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 4 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.11* | | mg/kg wet | *2.500* | | *84* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.24* | | mg/kg wet | *3.750* | | *113* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.09* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.36* | | mg/kg wet | *2.500* | | *94* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.60* | | mg/kg wet | *3.750* | | *69* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.78* | | mg/kg wet | *2.500* | | *71* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *2.76* | | mg/kg wet | *3.750* | | *74* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.75* | | mg/kg wet | *2.500* | | *110* | *30-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23K0414

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| Q | Calibration required quadratic regression (Q). |
| D | Diluted. |
| CD- | Continuing Calibration %Diff/Drift is below control limit (CD-). |
| BT | Benzidine tailing factor >2. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: Client

ESS Project ID: 23K0414
Date Received: 11/10/2023
Project Due Date: 11/16/2023
Days for Project: 4 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 7.3 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** (Yes) / No / NA
10. Were any analyses received outside of hold time? Yes (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 492598 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 492600 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 492602 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 492603 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 492604 | Yes | N/A | Yes | 8 oz jar | NP | |
| 5 | 492606 | Yes | N/A | Yes | 8 oz jar | NP | |
| 5 | 492607 | Yes | N/A | Yes | 8 oz jar | NP | |
| 6 | 492608 | Yes | N/A | Yes | 8 oz jar | NP | |
| 7 | 492610 | Yes | N/A | Yes | 8 oz jar | NP | |
| 7 | 492611 | Yes | N/A | Yes | 8 oz jar | NP | |
| 8 | 492612 | Yes | N/A | Yes | 8 oz jar | NP | |
| 8 | 492613 | Yes | N/A | Yes | 8 oz jar | NP | |
| 9 | 492614 | Yes | N/A | Yes | 8 oz jar | NP | |
| 9 | 492615 | Yes | N/A | Yes | 8 oz jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials dn

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 23K0414
Date Received: 11/10/2023

| | |
|---|---|
| Are barcode labels on correct containers? | Yes / No |
| Are all Flashpoint stickers attached/container ID # circled? | Yes / No / NA |
| Are all Hex Chrome stickers attached? | Yes / No / NA |
| Are all QC stickers attached? | Yes / No / NA |
| Are VOA stickers attached if bubbles noted? | Yes / No / NA |

Completed By: _____ Date & Time: 11/10/23 1642

Reviewed By: _____ Date & Time: 1711 11/10/23.

# CHAIN OF CUSTODY

ESS Lab # 23K0414 | Page 1 of 1

ESS LABORATORY
185 Frances Avenue
Cranston, RI 02910
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

Turn Time (Days): ☐ > 5 ☐ 5 ☑ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day

Regulatory State: MA Criteria: MCP S-1

Is this project for any of the following?:
☑ CT RCP ☒ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

**ELECTRONIC DELIVERABLES (Final Reports are PDF)**
☑ Limit Checker ☐ State Forms ☐ EQuIS
☑ Excel ☐ State Upload ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

## CLIENT INFORMATION

Client: ~~TEC~~ CEC
Address: 31 Bellows Rd
Raynham, MA 02767
Phone: 774-501-2176
Email: jkitchen@cecinc.com
Distribution List: Cdalbello@cecin.com
dbarbosa@cecinc.com

## PROJECT INFORMATION

Project Name: Mass CEC
Project Location: 4 Wright St.-New Bedford, MA
Project Number: 332-344
Project Manager: Jon Kitchen/Cassia Dal Bello
Bill to: Client
PO#:
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

## REQUESTED ANALYSES

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCBs | MCP Metals | SVOCs | Total Number of Bottles |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 11-9 | 12:45 | Comp | ~~Grab~~ Soil | CEC-1-1 (0-4) | X | X | X | 1 |
| 2 | 11-9 | 12:50 | Grab | Soil | CEC-1-1 (8-9.5) | X | X | X | 1 |
| 3 | 11-9 | 14:00 | Comp | Soil | CEC-4-1 (0-4) | X | X | X | 2 |
| 4 | 11-9 | 14:05 | Grab | Soil | CEC-4-1 (8-10) | X | X | X | 1 |
| 5 | 11-9 | 15:45 | Comp | Soil | CEC-2-1 (0-4) | X | X | X | 2 |
| 6 | 11-9 | 15:50 | Grab | Soil | CEC-2-1 (8.8-10) | X | X | X | 1 |
| 7 | 11-10 | 10:05 | Grab | Soil | CEC-5-1 (8-10 | X | X | X | 2 |
| 8 | 11-10 | 10:00 | Comp | Soil | CEC-5-1 (0-4) | X | X | X | 2 |
| 9 | 11-10 | 08:00 | Comp | Soil | CEC-3-1 (0-4) | X | X | X | 2 |
| DUP | [redacted] | | | Soil | [redacted] | | | | |
| Container Type: | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | | | | | J | J | J | |
| Container Volume: | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | | | | | 10 | 10 | 10 | 14 |
| Preservation Code: | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | | | | | 1 | 1 | 1 | |
| | | | | | Number of Bottles per Sample: | | | | |

Sampled by: Dave Barbosa (DB)

**Chain needs to be filled out neatly and completely for on time delivery.**

**Laboratory Use Only**
Cooler Temperature (°C): 7.3 ice

Comments: * Please specify "Other" preservative and containers types in this space

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

**Dissolved Filtration**
☐ Lab Filter

| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
|---|---|---|---|---|---|---|---|
| [signature] | 11-10-23 | 14:11 | [signature] | | | | |
| | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Jon Kitchen
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC - New Bedford (318-194)**
**ESS Laboratory Work Order Number: 23K0414**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 1:05 pm, Nov 28, 2023**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

## SAMPLE RECEIPT

The following samples were received on November 10, 2023 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**The cooler temperature was not within the acceptance limit of <6°C, however, samples were delivered on ice and therefore meet regulatory criteria.**

**Revision 1 November 28, 2023: This report has been revised to include TCLP lead on samples -01 and -05.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 23K0414-01 | CEC-1-1 0-4 | Soil | 1311, 1311/6010C, 6010C, 7471B, 8082A, 8270D |
| 23K0414-02 | CEC-1-1 8-9.5 | Soil | 6010C, 6020A, 7471B, 8082A, 8270D |
| 23K0414-03 | CEC-4-1 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0414-04 | CEC-4-1 8-10 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0414-05 | CEC-2-1 0-4 | Soil | 1311, 1311/6010C, 6010C, 7471B, 8082A, 8270D |
| 23K0414-06 | CEC-2-1 8.8-10 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0414-07 | CEC-5-1 8-10 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0414-08 | CEC-5-1-0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0414-09 | CEC-3-1 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23K0414

## PROJECT NARRATIVE

**8270D Semi-Volatile Organic Compounds**

D3K0263-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (89% @ 80-120%), Di-n-octylphthalate (90% @ 80-120%)

D3K0263-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
4-Nitrophenol (38% @ 20%)

D3K0263-TUN1 **Benzidine tailing factor >2.**

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **23K0414-01 through 23K0414-09**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | (x) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| (x) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | (x) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes (x) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: November 16, 2023
Printed Name: Laur[illegible] Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 0-4
Date Sampled: 11/09/23 12:45
Percent Solids: 78

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.59) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| **Arsenic** | **4.51** (2.30) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| **Barium** | **74.7** (2.30) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| **Beryllium** | **0.25** (0.10) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| Cadmium | ND (0.46) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| **Chromium** | **8.63** (0.92) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| **Lead** | **307** (4.59) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| **Mercury** | **1.90** (0.404) | | 7471B | | 10 | AFV | 11/13/23 20:42 | 0.63 | 40 | DK31308 |
| **Nickel** | **5.44** (2.30) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| Selenium | ND (4.59) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| Silver | ND (0.46) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| Thallium | ND (4.59) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| **Vanadium** | **10.6** (0.92) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |
| **Zinc** | **101** (2.30) | | 6010C | | 1 | CEV | 11/13/23 16:16 | 2.8 | 100 | DK31051 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 0-4
Date Sampled: 11/09/23 12:45
Percent Solids: 78

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-01
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A_TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **1.18** (0.050) | | 1311/6010C | | 1 | CEV | 11/21/23 16:17 | 50 | 50 | DK32113 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 0-4
Date Sampled: 11/09/23 12:45
Percent Solids: 78
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 11/16/23 12:53 | | DK31411 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 11/16/23 12:53 | | DK31411 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 11/16/23 12:53 | | DK31411 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 11/16/23 12:53 | | DK31411 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 11/16/23 12:53 | | DK31411 |
| **Aroclor 1254 [2C]** | **0.1** (0.06) | | 8082A | | 1 | 11/16/23 12:53 | | DK31411 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 11/16/23 12:53 | | DK31411 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 11/16/23 12:53 | | DK31411 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 11/16/23 12:53 | | DK31411 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *79 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *66 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 0-4
Date Sampled: 11/09/23 12:45
Percent Solids: 78
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.032) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.27) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.636) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.27) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Acetophenone | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Aniline | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Anthracene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Azobenzene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| **Benzo(a)pyrene** | **0.369** (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| **Benzo(b)fluoranthene** | **0.323** (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 0-4
Date Sampled: 11/09/23 12:45
Percent Solids: 78
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| **Chrysene** | **0.337** (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.636) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| **Fluoranthene** | **0.609** (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Fluorene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Isophorone | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Naphthalene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.27) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Phenanthrene | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| Phenol | ND (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |
| **Pyrene** | **0.612** (0.318) | | 8270D | | 1 | 11/13/23 19:22 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *81 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *90 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *78 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 0-4
Date Sampled: 11/09/23 12:45
Percent Solids: 78
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *84 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *67 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *75 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *70 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *100 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 0-4
Date Sampled: 11/09/23 12:45
Percent Solids: 78
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-01
Sample Matrix: Soil
Units: °C
Analyst: CEV
Prepared: 11/20/23 17:06

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Batch |
|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **19.8** (N/A) | | 1311 | | 1 | CEV | 11/21/23 9:45 | DK32056 |
| **Temperature (Max C)** | **22.2** (N/A) | | 1311 | | 1 | CEV | 11/21/23 9:45 | DK32056 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 ºC.** (N/A) | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 8-9.5
Date Sampled: 11/09/23 12:50
Percent Solids: 20

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (9.14) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| Arsenic | ND (4.57) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| **Barium** | **22.8** (4.57) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| **Beryllium** | **0.28** (0.20) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| Cadmium | ND (0.91) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| **Chromium** | **13.2** (1.83) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| **Lead** | **13.8** (9.14) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| Mercury | ND (0.159) | | 7471B | | 1 | AFV | 11/13/23 16:44 | 0.63 | 40 | DK31308 |
| **Nickel** | **11.0** (4.57) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| Selenium | ND (9.14) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| Silver | ND (0.91) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| Thallium | ND (0.91) | | 6020A | | 1 | BJV | 11/15/23 13:46 | 5.53 | 100 | DK31051 |
| **Vanadium** | **28.1** (1.83) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |
| **Zinc** | **17.2** (4.57) | | 6010C | | 1 | CEV | 11/13/23 16:18 | 5.53 | 100 | DK31051 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 8-9.5
Date Sampled: 11/09/23 12:50
Percent Solids: 20
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.3) | | 8082A | | 1 | 11/16/23 13:13 | | DK31411 |
| Aroclor 1221 | ND (0.3) | | 8082A | | 1 | 11/16/23 13:13 | | DK31411 |
| Aroclor 1232 | ND (0.3) | | 8082A | | 1 | 11/16/23 13:13 | | DK31411 |
| Aroclor 1242 | ND (0.3) | | 8082A | | 1 | 11/16/23 13:13 | | DK31411 |
| Aroclor 1248 | ND (0.3) | | 8082A | | 1 | 11/16/23 13:13 | | DK31411 |
| Aroclor 1254 | ND (0.3) | | 8082A | | 1 | 11/16/23 13:13 | | DK31411 |
| Aroclor 1260 | ND (0.3) | | 8082A | | 1 | 11/16/23 13:13 | | DK31411 |
| Aroclor 1262 | ND (0.3) | | 8082A | | 1 | 11/16/23 13:13 | | DK31411 |
| Aroclor 1268 | ND (0.3) | | 8082A | | 1 | 11/16/23 13:13 | | DK31411 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *56 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *55 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 8-9.5
Date Sampled: 11/09/23 12:50
Percent Solids: 20
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.133) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (5.32) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (2.66) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (5.32) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Acenaphthene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Acenaphthylene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Acetophenone | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Aniline | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Anthracene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Azobenzene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Benzo(a)pyrene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Benzo(b)fluoranthene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 8-9.5
Date Sampled: 11/09/23 12:50
Percent Solids: 20
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Chrysene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Dibenzofuran | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Diethylphthalate | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (2.66) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Fluoranthene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Fluorene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Hexachloroethane | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Isophorone | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Naphthalene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Nitrobenzene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (5.32) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Phenanthrene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Phenol | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |
| Pyrene | ND (1.33) | | 8270D | | 1 | 11/13/23 19:53 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *40 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *58 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *42 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-1 8-9.5
Date Sampled: 11/09/23 12:50
Percent Solids: 20
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *53 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *33 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *42 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *36 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *64 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 0-4
Date Sampled: 11/09/23 14:00
Percent Solids: 89

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-03
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.05) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| Arsenic | ND (2.02) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| **Barium** | **11.9** (2.02) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| **Beryllium** | **0.16** (0.09) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| Cadmium | ND (0.40) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| **Chromium** | **4.55** (0.81) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| **Lead** | **16.3** (4.05) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| Mercury | ND (0.033) | | 7471B | | 1 | AFV | 11/13/23 16:46 | 0.67 | 40 | DK31308 |
| **Nickel** | **4.11** (2.02) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| Selenium | ND (4.05) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| Silver | ND (0.40) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| Thallium | ND (4.05) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| **Vanadium** | **6.01** (0.81) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |
| **Zinc** | **73.1** (2.02) | | 6010C | | 1 | CEV | 11/13/23 16:20 | 2.77 | 100 | DK31051 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 0-4
Date Sampled: 11/09/23 14:00
Percent Solids: 89
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 11/16/23 13:32 | | DK31411 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 11/16/23 13:32 | | DK31411 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 11/16/23 13:32 | | DK31411 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 11/16/23 13:32 | | DK31411 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 11/16/23 13:32 | | DK31411 |
| Aroclor 1254 [2C] | ND (0.05) | | 8082A | | 1 | 11/16/23 13:32 | | DK31411 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 11/16/23 13:32 | | DK31411 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 11/16/23 13:32 | | DK31411 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 11/16/23 13:32 | | DK31411 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 0-4
Date Sampled: 11/09/23 14:00
Percent Solids: 89
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.07) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.536) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.07) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Acetophenone | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Aniline | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Anthracene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Azobenzene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Benzo(a)pyrene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Benzo(b)fluoranthene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 0-4
Date Sampled: 11/09/23 14:00
Percent Solids: 89
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Chrysene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.536) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Fluoranthene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Fluorene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Isophorone | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Naphthalene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.07) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Phenanthrene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Phenol | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |
| Pyrene | ND (0.268) | | 8270D | | 1 | 11/13/23 20:24 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *85 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *97 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *83 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 0-4
Date Sampled: 11/09/23 14:00
Percent Solids: 89
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *86 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *74 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *81 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *74 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *100 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 8-10
Date Sampled: 11/09/23 14:05
Percent Solids: 78

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (2.15) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| Arsenic | ND (1.08) | | 6010C | | 1 | CEV | 11/14/23 10:46 | 5.96 | 100 | DK31051 |
| **Barium** | **5.87** (1.08) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| **Beryllium** | **0.31** (0.05) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| Cadmium | ND (0.22) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| **Chromium** | **6.97** (0.43) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| **Lead** | **4.16** (2.15) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| Mercury | ND (0.040) | | 7471B | | 1 | AFV | 11/13/23 16:48 | 0.64 | 40 | DK31308 |
| **Nickel** | **3.62** (1.08) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| Selenium | ND (2.15) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| Silver | ND (0.43) | | 6010C | | 2 | CEV | 11/14/23 10:44 | 5.96 | 100 | DK31051 |
| Thallium | ND (2.15) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| **Vanadium** | **13.9** (0.43) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |
| **Zinc** | **55.2** (1.08) | | 6010C | | 1 | CEV | 11/13/23 16:23 | 5.96 | 100 | DK31051 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 8-10
Date Sampled: 11/09/23 14:05
Percent Solids: 78
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 11/16/23 13:52 | | DK31411 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 11/16/23 13:52 | | DK31411 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 11/16/23 13:52 | | DK31411 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 11/16/23 13:52 | | DK31411 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 11/16/23 13:52 | | DK31411 |
| Aroclor 1254 | ND (0.06) | | 8082A | | 1 | 11/16/23 13:52 | | DK31411 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 11/16/23 13:52 | | DK31411 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 11/16/23 13:52 | | DK31411 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 11/16/23 13:52 | | DK31411 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *74 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *70 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 8-10
Date Sampled: 11/09/23 14:05
Percent Solids: 78
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.034) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.34) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.672) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.34) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Acetophenone | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Aniline | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Anthracene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Azobenzene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Benzo(a)pyrene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Benzo(b)fluoranthene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 8-10
Date Sampled: 11/09/23 14:05
Percent Solids: 78
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| **bis(2-Ethylhexyl)phthalate** | **0.354** (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Chrysene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.672) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Fluoranthene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Fluorene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Isophorone | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Naphthalene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.34) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Phenanthrene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Phenol | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |
| Pyrene | ND (0.336) | | 8270D | | 1 | 11/13/23 20:55 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *87 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *100 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *86 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-1 8-10
Date Sampled: 11/09/23 14:05
Percent Solids: 78
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *94 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *77 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *84 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *77 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *108 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 0-4
Date Sampled: 11/09/23 15:45
Percent Solids: 75

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-05
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.65) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| **Arsenic** | **2.59** (2.32) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| **Barium** | **44.3** (2.32) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| **Beryllium** | **0.24** (0.10) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| Cadmium | ND (0.46) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| **Chromium** | **21.2** (0.93) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| **Lead** | **310** (4.65) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| Mercury | ND (0.039) | | 7471B | | 1 | AFV | 11/13/23 16:50 | 0.68 | 40 | DK31308 |
| **Nickel** | **6.15** (2.32) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| Selenium | ND (4.65) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| Silver | ND (0.46) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| Thallium | ND (4.65) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| **Vanadium** | **14.4** (0.93) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |
| **Zinc** | **76.0** (2.32) | | 6010C | | 1 | CEV | 11/13/23 16:25 | 2.85 | 100 | DK31051 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 0-4
Date Sampled: 11/09/23 15:45
Percent Solids: 75

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-05
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A_TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.052** (0.050) | | 1311/6010C | | 1 | CEV | 11/21/23 16:19 | 50 | 50 | DK32113 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 0-4
Date Sampled: 11/09/23 15:45
Percent Solids: 75
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 11/16/23 14:11 | | DK31411 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 11/16/23 14:11 | | DK31411 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 11/16/23 14:11 | | DK31411 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 11/16/23 14:11 | | DK31411 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 11/16/23 14:11 | | DK31411 |
| Aroclor 1254 | ND (0.06) | | 8082A | | 1 | 11/16/23 14:11 | | DK31411 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 11/16/23 14:11 | | DK31411 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 11/16/23 14:11 | | DK31411 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 11/16/23 14:11 | | DK31411 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 0-4
Date Sampled: 11/09/23 15:45
Percent Solids: 75
Initial Volume: 20.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.032) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.28) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.640) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.28) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Acetophenone | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Aniline | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Anthracene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Azobenzene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Benzo(a)pyrene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Benzo(b)fluoranthene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 0-4
Date Sampled: 11/09/23 15:45
Percent Solids: 75
Initial Volume: 20.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Chrysene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.640) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Fluoranthene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Fluorene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Isophorone | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Naphthalene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.28) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Phenanthrene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Phenol | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |
| Pyrene | ND (0.320) | | 8270D | | 1 | 11/13/23 21:25 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *82 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *92 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *80 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 0-4
Date Sampled: 11/09/23 15:45
Percent Solids: 75
Initial Volume: 20.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *87 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *71 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *78 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *72 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *109 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 0-4
Date Sampled: 11/09/23 15:45
Percent Solids: 75
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-05
Sample Matrix: Soil
Units: °C
Analyst: CEV
Prepared: 11/20/23 17:06

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Batch |
|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **19.8** (N/A) | | 1311 | | 1 | CEV | 11/21/23 9:45 | DK32056 |
| **Temperature (Max C)** | **22.2** (N/A) | | 1311 | | 1 | CEV | 11/21/23 9:45 | DK32056 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 ºC.** (N/A) | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 8.8-10
Date Sampled: 11/09/23 15:50
Percent Solids: 61

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-06
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (6.15) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| **Arsenic** | **3.26** (3.08) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| **Barium** | **44.2** (3.08) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| **Beryllium** | **0.42** (0.14) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| **Cadmium** | **0.84** (0.62) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| **Chromium** | **17.8** (1.23) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| **Lead** | **136** (6.15) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| **Mercury** | **1.17** (0.239) | | 7471B | | 5 | AFV | 11/13/23 20:44 | 0.68 | 40 | DK31308 |
| **Nickel** | **8.28** (3.08) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| Selenium | ND (6.15) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| Silver | ND (0.62) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| Thallium | ND (6.15) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| **Vanadium** | **17.9** (1.23) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |
| **Zinc** | **68.6** (3.08) | | 6010C | | 1 | CEV | 11/13/23 16:27 | 2.67 | 100 | DK31051 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 8.8-10
Date Sampled: 11/09/23 15:50
Percent Solids: 61
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.08) | | 8082A | | 1 | 11/16/23 11:31 | | DK31625 |
| Aroclor 1221 | ND (0.08) | | 8082A | | 1 | 11/16/23 11:31 | | DK31625 |
| Aroclor 1232 | ND (0.08) | | 8082A | | 1 | 11/16/23 11:31 | | DK31625 |
| Aroclor 1242 | ND (0.08) | | 8082A | | 1 | 11/16/23 11:31 | | DK31625 |
| Aroclor 1248 | ND (0.08) | | 8082A | | 1 | 11/16/23 11:31 | | DK31625 |
| Aroclor 1254 [2C] | ND (0.08) | | 8082A | | 1 | 11/16/23 11:31 | | DK31625 |
| Aroclor 1260 | ND (0.08) | | 8082A | | 1 | 11/16/23 11:31 | | DK31625 |
| Aroclor 1262 | ND (0.08) | | 8082A | | 1 | 11/16/23 11:31 | | DK31625 |
| Aroclor 1268 | ND (0.08) | | 8082A | | 1 | 11/16/23 11:31 | | DK31625 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *76 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 8.8-10
Date Sampled: 11/09/23 15:50
Percent Solids: 61
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.041) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.63) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.817) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.63) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Acetophenone | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Aniline | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Anthracene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Azobenzene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Benzo(a)pyrene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Benzo(b)fluoranthene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 8.8-10
Date Sampled: 11/09/23 15:50
Percent Solids: 61
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Chrysene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.817) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| **Fluoranthene** | **0.425** (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Fluorene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Isophorone | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Naphthalene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.63) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Phenanthrene | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| Phenol | ND (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |
| **Pyrene** | **0.498** (0.409) | | 8270D | | 1 | 11/13/23 21:56 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *78 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *100 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *79 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-1 8.8-10
Date Sampled: 11/09/23 15:50
Percent Solids: 61
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *89 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *68 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *77 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *69 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *104 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1 8-10
Date Sampled: 11/10/23 10:05
Percent Solids: 81

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-07
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.86) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| **Arsenic** | **2.58** (2.43) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| **Barium** | **60.4** (2.43) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| **Beryllium** | **0.24** (0.11) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| Cadmium | ND (0.49) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| **Chromium** | **7.81** (0.97) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| **Lead** | **15.4** (4.86) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| **Mercury** | **0.071** (0.036) | | 7471B | | 1 | AFV | 11/13/23 17:06 | 0.69 | 40 | DK31308 |
| **Nickel** | **4.18** (2.43) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| Selenium | ND (4.86) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| Silver | ND (0.49) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| Thallium | ND (4.86) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| **Vanadium** | **14.4** (0.97) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |
| **Zinc** | **18.9** (2.43) | | 6010C | | 1 | CEV | 11/13/23 16:40 | 2.55 | 100 | DK31051 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1 8-10
Date Sampled: 11/10/23 10:05
Percent Solids: 81
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 11/16/23 11:51 | | DK31625 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 11/16/23 11:51 | | DK31625 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 11/16/23 11:51 | | DK31625 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 11/16/23 11:51 | | DK31625 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 11/16/23 11:51 | | DK31625 |
| Aroclor 1254 | ND (0.06) | | 8082A | | 1 | 11/16/23 11:51 | | DK31625 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 11/16/23 11:51 | | DK31625 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 11/16/23 11:51 | | DK31625 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 11/16/23 11:51 | | DK31625 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *91 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1 8-10
Date Sampled: 11/10/23 10:05
Percent Solids: 81
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.032) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.30) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.649) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.30) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Acetophenone | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Aniline | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Anthracene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Azobenzene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Benzo(a)pyrene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Benzo(b)fluoranthene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1 8-10
Date Sampled: 11/10/23 10:05
Percent Solids: 81
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Chrysene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.649) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Fluoranthene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Fluorene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Isophorone | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Naphthalene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.30) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Phenanthrene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Phenol | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |
| Pyrene | ND (0.325) | | 8270D | | 1 | 11/13/23 22:27 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *83 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *105 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *80 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1 8-10
Date Sampled: 11/10/23 10:05
Percent Solids: 81
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *92 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *69 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *78 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *71 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *106 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1-0-4
Date Sampled: 11/10/23 10:00
Percent Solids: 94

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-08
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (3.80) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| Arsenic | ND (1.90) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| **Barium** | **17.7** (1.90) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| **Beryllium** | **0.15** (0.08) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| Cadmium | ND (0.38) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| **Chromium** | **7.65** (0.76) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| **Lead** | **5.94** (3.80) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| Mercury | ND (0.031) | | 7471B | | 1 | AFV | 11/13/23 17:08 | 0.69 | 40 | DK31308 |
| **Nickel** | **5.66** (1.90) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| Selenium | ND (3.80) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| Silver | ND (0.38) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| Thallium | ND (3.80) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| **Vanadium** | **6.02** (0.76) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |
| **Zinc** | **15.2** (1.90) | | 6010C | | 1 | CEV | 11/13/23 16:42 | 2.8 | 100 | DK31051 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1-0-4
Date Sampled: 11/10/23 10:00
Percent Solids: 94
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 11/16/23 0:19 | | DK31412 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 11/16/23 0:19 | | DK31412 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 11/16/23 0:19 | | DK31412 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 11/16/23 0:19 | | DK31412 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 11/16/23 0:19 | | DK31412 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 11/16/23 0:19 | | DK31412 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 11/16/23 0:19 | | DK31412 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 11/16/23 0:19 | | DK31412 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 11/16/23 0:19 | | DK31412 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *76 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1-0-4
Date Sampled: 11/10/23 10:00
Percent Solids: 94
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.05) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.524) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.05) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Acetophenone | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Aniline | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Anthracene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Azobenzene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Benzo(a)pyrene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Benzo(b)fluoranthene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1-0-4
Date Sampled: 11/10/23 10:00
Percent Solids: 94
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Chrysene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.524) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Fluoranthene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Fluorene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Isophorone | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Naphthalene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.05) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Phenanthrene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Phenol | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |
| Pyrene | ND (0.262) | | 8270D | | 1 | 11/13/23 22:58 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *83 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *90 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *86 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-1-0-4
Date Sampled: 11/10/23 10:00
Percent Solids: 94
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *88 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *74 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *75 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *78 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *113 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-1 0-4
Date Sampled: 11/10/23 08:00
Percent Solids: 89

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-09
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (3.80) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| Arsenic | ND (1.90) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| **Barium** | **23.1** (1.90) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| **Beryllium** | **0.17** (0.08) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| Cadmium | ND (0.38) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| **Chromium** | **12.9** (0.76) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| **Lead** | **28.6** (3.80) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| **Mercury** | **0.072** (0.035) | | 7471B | | 1 | AFV | 11/13/23 17:11 | 0.64 | 40 | DK31308 |
| **Nickel** | **5.82** (1.90) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| Selenium | ND (3.80) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| Silver | ND (0.38) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| Thallium | ND (3.80) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| **Vanadium** | **9.31** (0.76) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |
| **Zinc** | **41.0** (1.90) | | 6010C | | 1 | CEV | 11/13/23 16:44 | 2.95 | 100 | DK31051 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-1 0-4
Date Sampled: 11/10/23 08:00
Percent Solids: 89
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 11/16/23 12:11 | | DK31625 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 11/16/23 12:11 | | DK31625 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 11/16/23 12:11 | | DK31625 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 11/16/23 12:11 | | DK31625 |
| **Aroclor 1248** | **0.2** (0.05) | | 8082A | | 1 | 11/16/23 12:11 | | DK31625 |
| **Aroclor 1254** | **0.6** (0.05) | | 8082A | | 1 | 11/16/23 12:11 | | DK31625 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 11/16/23 12:11 | | DK31625 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 11/16/23 12:11 | | DK31625 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 11/16/23 12:11 | | DK31625 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *81 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-1 0-4
Date Sampled: 11/10/23 08:00
Percent Solids: 89
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.029) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.18) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.589) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.18) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Acetophenone | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Aniline | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Anthracene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Azobenzene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Benzo(a)pyrene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Benzo(b)fluoranthene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-1 0-4
Date Sampled: 11/10/23 08:00
Percent Solids: 89
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Chrysene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.589) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Fluoranthene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Fluorene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Isophorone | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Naphthalene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.18) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Phenanthrene | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| Phenol | ND (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |
| **Pyrene** | **0.334** (0.295) | | 8270D | | 1 | 11/13/23 23:29 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *77 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *96 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *75 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-1 0-4
Date Sampled: 11/10/23 08:00
Percent Solids: 89
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0414
ESS Laboratory Sample ID: 23K0414-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 10:45

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *83 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *66 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *69 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *66 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *106 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DK31051 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Antimony | ND | 4.42 | mg/kg wet | | | | | | | |
| Arsenic | ND | 2.21 | mg/kg wet | | | | | | | |
| Barium | ND | 2.21 | mg/kg wet | | | | | | | |
| Beryllium | ND | 0.10 | mg/kg wet | | | | | | | |
| Cadmium | ND | 0.44 | mg/kg wet | | | | | | | |
| Chromium | ND | 0.88 | mg/kg wet | | | | | | | |
| Lead | ND | 4.42 | mg/kg wet | | | | | | | |
| Nickel | ND | 2.21 | mg/kg wet | | | | | | | |
| Selenium | ND | 4.42 | mg/kg wet | | | | | | | |
| Silver | ND | 0.44 | mg/kg wet | | | | | | | |
| Thallium | ND | 4.42 | mg/kg wet | | | | | | | |
| Vanadium | ND | 0.88 | mg/kg wet | | | | | | | |
| Zinc | ND | 2.21 | mg/kg wet | | | | | | | |
| **Blank** | | | | | | | | | | |
| Thallium | ND | 0.50 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Antimony | 35.8 | 14.5 | mg/kg wet | 54.20 | | 66 | 40-160 | | | |
| Arsenic | 236 | 7.25 | mg/kg wet | 258.0 | | 92 | 80-120 | | | |
| Barium | 736 | 7.25 | mg/kg wet | 809.0 | | 91 | 80-120 | | | |
| Beryllium | 45.0 | 0.32 | mg/kg wet | 48.50 | | 93 | 80-120 | | | |
| Cadmium | 287 | 1.45 | mg/kg wet | 321.0 | | 90 | 80-120 | | | |
| Chromium | 113 | 2.90 | mg/kg wet | 133.0 | | 85 | 80-120 | | | |
| Lead | 95.3 | 14.5 | mg/kg wet | 102.0 | | 93 | 80-120 | | | |
| Nickel | 132 | 7.25 | mg/kg wet | 137.0 | | 96 | 80-120 | | | |
| Selenium | 49.1 | 14.5 | mg/kg wet | 49.40 | | 99 | 80-120 | | | |
| Silver | 21.4 | 1.45 | mg/kg wet | 22.70 | | 94 | 80-120 | | | |
| Thallium | 76.5 | 14.5 | mg/kg wet | 81.40 | | 94 | 80-120 | | | |
| Vanadium | 90.8 | 2.90 | mg/kg wet | 108.0 | | 84 | 55-145 | | | |
| Zinc | 485 | 7.25 | mg/kg wet | 540.0 | | 90 | 80-120 | | | |
| **LCS** | | | | | | | | | | |
| Thallium | 84.5 | 7.25 | mg/kg wet | 81.40 | | 104 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Antimony | 32.4 | 15.9 | mg/kg wet | 54.20 | | 60 | 40-160 | 10 | 30 | |
| Arsenic | 220 | 7.94 | mg/kg wet | 258.0 | | 85 | 80-120 | 7 | 30 | |
| Barium | 730 | 7.94 | mg/kg wet | 809.0 | | 90 | 80-120 | 0.8 | 30 | |
| Beryllium | 42.3 | 0.35 | mg/kg wet | 48.50 | | 87 | 80-120 | 6 | 20 | |
| Cadmium | 270 | 1.59 | mg/kg wet | 321.0 | | 84 | 80-120 | 6 | 30 | |
| Chromium | 106 | 3.17 | mg/kg wet | 133.0 | | 80 | 80-120 | 6 | 30 | |
| Lead | 88.3 | 15.9 | mg/kg wet | 102.0 | | 87 | 80-120 | 8 | 20 | |
| Nickel | 124 | 7.94 | mg/kg wet | 137.0 | | 91 | 80-120 | 6 | 30 | |
| Selenium | 43.8 | 15.9 | mg/kg wet | 49.40 | | 89 | 80-120 | 11 | 30 | |
| Silver | 19.9 | 1.59 | mg/kg wet | 22.70 | | 88 | 80-120 | 7 | 30 | |
| Thallium | 70.6 | 15.9 | mg/kg wet | 81.40 | | 87 | 80-120 | 8 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DK31051 - 3050B** | | | | | | | | | | |
| Vanadium | 83.8 | 3.17 | mg/kg wet | 108.0 | | 78 | 55-145 | 8 | 30 | |
| Zinc | 453 | 7.94 | mg/kg wet | 540.0 | | 84 | 80-120 | 7 | 30 | |
| **LCS Dup** | | | | | | | | | | |
| Thallium | 80.7 | 7.94 | mg/kg wet | 81.40 | | 99 | 80-120 | 5 | 30 | |
| **Batch DK31308 - 7471B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Mercury | ND | 0.030 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Mercury | 8.98 | 3.25 | mg/kg wet | 17.10 | | 52 | 33.1-86.55 | | | |
| **LCS Dup** | | | | | | | | | | |
| Mercury | 9.94 | 3.00 | mg/kg wet | 17.10 | | 58 | 33.1-86.55 | 10 | 30 | |
| **1311 TCLP Metals** | | | | | | | | | | |
| **Batch DK32113 - 3005A_TCLP** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 0.050 | mg/L | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 0.458 | 0.050 | mg/L | 0.5000 | | 92 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 0.481 | 0.050 | mg/L | 0.5000 | | 96 | 80-120 | 5 | 20 | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DK31411 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0216* | | mg/kg wet | *0.02500* | | *86* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DK31411 - 3540C** | | | | | | | | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0227* | | mg/kg wet | *0.02500* | | *91* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0226* | | mg/kg wet | *0.02500* | | *91* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 67 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 70 | 40-140 | | | |
| Aroclor 1260 | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 64 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 66 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0185* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0176* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0187* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 86 | 40-140 | 25 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 90 | 40-140 | 25 | 30 | |
| Aroclor 1260 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 86 | 40-140 | 29 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 87 | 40-140 | 28 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0213* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0227* | | mg/kg wet | *0.02500* | | *91* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0212* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0224* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| **Batch DK31412 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DK31412 - 3540C** | | | | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0188* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0201* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | 0.2 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | 0.7 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | 1 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 1 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0199* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0201* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **Batch DK31625 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DK31625 - 3540C** | | | | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0226* | | mg/kg wet | *0.02500* | | *90* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0223* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0223* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 86 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0212* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0209* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0212* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 86 | 40-140 | 0.2 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 1 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | 0.4 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | 1 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0212* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0211* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0211* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0214* | | mg/kg wet | *0.02500* | | *86* | *30-150* | | | |
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.33* | | mg/kg wet | *2.500* | | *93* | *30-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.54* | | mg/kg wet | *3.750* | | *95* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.30* | | mg/kg wet | *3.750* | | *88* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.30* | | mg/kg wet | *2.500* | | *92* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.71* | | mg/kg wet | *3.750* | | *72* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.22* | | mg/kg wet | *2.500* | | *89* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.08* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.99* | | mg/kg wet | *2.500* | | *120* | *30-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.03 | 0.025 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| 1,2-Dichlorobenzene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| 1,3-Dichlorobenzene | 2.06 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 30-130 | | | |
| 2,4-Dichlorophenol | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 30-130 | | | |
| 2,4-Dimethylphenol | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 30-130 | | | |
| 2,4-Dinitrophenol | 1.47 | 1.00 | mg/kg wet | 2.500 | | 59 | 30-130 | | | |
| 2,4-Dinitrotoluene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| 2-Chloronaphthalene | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| 2-Chlorophenol | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 30-130 | | | |
| 2-Methylnaphthalene | 1.84 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| 2-Methylphenol | 1.80 | 0.250 | mg/kg wet | 2.500 | | 72 | 30-130 | | | |
| 2-Nitrophenol | 1.89 | 0.500 | mg/kg wet | 2.500 | | 76 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| 3+4-Methylphenol | 3.64 | 0.250 | mg/kg wet | 5.000 | | 73 | 30-130 | | | |
| 4-Bromophenyl-phenylether | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| 4-Chloroaniline | 1.49 | 0.250 | mg/kg wet | 2.500 | | 60 | 40-140 | | | |
| 4-Nitrophenol | 1.42 | 1.00 | mg/kg wet | 2.500 | | 57 | 30-130 | | | |
| Acenaphthene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Acenaphthylene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Acetophenone | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Aniline | 1.29 | 0.250 | mg/kg wet | 2.500 | | 52 | 40-140 | | | |
| Anthracene | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Azobenzene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Benzo(a)anthracene | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Benzo(a)pyrene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.64 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 1.63 | 0.250 | mg/kg wet | 2.500 | | 65 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 1.86 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.67 | 0.250 | mg/kg wet | 2.500 | | 67 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| bis(2-Ethylhexyl)phthalate | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Butylbenzylphthalate | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Chrysene | 2.34 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| Dibenzofuran | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Diethylphthalate | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Dimethylphthalate | 2.29 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Di-n-butylphthalate | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Di-n-octylphthalate | 2.03 | 0.500 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Fluoranthene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Fluorene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Hexachlorobenzene | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| Hexachlorobutadiene | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Hexachloroethane | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Isophorone | 1.56 | 0.250 | mg/kg wet | 2.500 | | 62 | 40-140 | | | |
| Naphthalene | 1.77 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Nitrobenzene | 1.66 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | | | |
| N-Nitrosodimethylamine | 1.64 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | | | |
| Pentachlorophenol | 1.73 | 1.00 | mg/kg wet | 2.500 | | 69 | 30-130 | | | |
| Phenanthrene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Phenol | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 30-130 | | | |
| Pyrene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.17* | | mg/kg wet | *2.500* | | *87* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.97* | | mg/kg wet | *3.750* | | *106* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.17* | | mg/kg wet | *3.750* | | *85* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.30* | | mg/kg wet | *2.500* | | *92* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.85* | | mg/kg wet | *3.750* | | *76* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.84* | | mg/kg wet | *2.500* | | *74* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *2.89* | | mg/kg wet | *3.750* | | *77* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.64* | | mg/kg wet | *2.500* | | *106* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.16 | 0.025 | mg/kg wet | 2.500 | | 86 | 40-140 | 6 | 30 | |
| 1,2,4-Trichlorobenzene | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 5 | 30 | |
| 1,2-Dichlorobenzene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 2 | 30 | |
| 1,3-Dichlorobenzene | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 0.4 | 30 | |
| 1,4-Dichlorobenzene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 0.4 | 30 | |
| 2,4,5-Trichlorophenol | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 30-130 | 7 | 30 | |
| 2,4,6-Trichlorophenol | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 30-130 | 6 | 30 | |
| 2,4-Dichlorophenol | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 30-130 | 5 | 30 | |
| 2,4-Dimethylphenol | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 30-130 | 5 | 30 | |
| 2,4-Dinitrophenol | 1.70 | 1.00 | mg/kg wet | 2.500 | | 68 | 30-130 | 15 | 30 | |
| 2,4-Dinitrotoluene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 8 | 30 | |
| 2,6-Dinitrotoluene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 7 | 30 | |
| 2-Chloronaphthalene | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 2 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| 2-Chlorophenol | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 30-130 | 0.2 | 30 | |
| 2-Methylnaphthalene | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | 3 | 30 | |
| 2-Methylphenol | 1.79 | 0.250 | mg/kg wet | 2.500 | | 71 | 30-130 | 0.9 | 30 | |
| 2-Nitrophenol | 1.99 | 0.500 | mg/kg wet | 2.500 | | 79 | 30-130 | 5 | 30 | |
| 3,3´-Dichlorobenzidine | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 8 | 30 | |
| 3+4-Methylphenol | 3.62 | 0.250 | mg/kg wet | 5.000 | | 72 | 30-130 | 0.5 | 30 | |
| 4-Bromophenyl-phenylether | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | 9 | 30 | |
| 4-Chloroaniline | 1.50 | 0.250 | mg/kg wet | 2.500 | | 60 | 40-140 | 1 | 30 | |
| 4-Nitrophenol | 1.40 | 1.00 | mg/kg wet | 2.500 | | 56 | 30-130 | 2 | 30 | |
| Acenaphthene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 5 | 30 | |
| Acenaphthylene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 5 | 30 | |
| Acetophenone | 1.71 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | 4 | 30 | |
| Aniline | 1.36 | 0.250 | mg/kg wet | 2.500 | | 55 | 40-140 | 5 | 30 | |
| Anthracene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 2 | 30 | |
| Azobenzene | 1.86 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | 7 | 30 | |
| Benzo(a)anthracene | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 6 | 30 | |
| Benzo(a)pyrene | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 7 | 30 | |
| Benzo(b)fluoranthene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 6 | 30 | |
| Benzo(g,h,i)perylene | 2.89 | 0.250 | mg/kg wet | 2.500 | | 116 | 40-140 | 9 | 30 | |
| Benzo(k)fluoranthene | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 7 | 30 | |
| bis(2-Chloroethoxy)methane | 1.63 | 0.250 | mg/kg wet | 2.500 | | 65 | 40-140 | 0.03 | 30 | |
| bis(2-Chloroethyl)ether | 1.67 | 0.250 | mg/kg wet | 2.500 | | 67 | 40-140 | 11 | 30 | |
| bis(2-chloroisopropyl)Ether | 1.64 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | 2 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 3 | 30 | |
| Butylbenzylphthalate | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 4 | 30 | |
| Chrysene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 6 | 30 | |
| Dibenzo(a,h)Anthracene | 2.82 | 0.250 | mg/kg wet | 2.500 | | 113 | 40-140 | 7 | 30 | |
| Dibenzofuran | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 4 | 30 | |
| Diethylphthalate | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 1 | 30 | |
| Dimethylphthalate | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 4 | 30 | |
| Di-n-butylphthalate | 2.26 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 0.9 | 30 | |
| Di-n-octylphthalate | 2.12 | 0.500 | mg/kg wet | 2.500 | | 85 | 40-140 | 4 | 30 | |
| Fluoranthene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 2 | 30 | |
| Fluorene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 3 | 30 | |
| Hexachlorobenzene | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 3 | 30 | |
| Hexachlorobutadiene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 4 | 30 | |
| Hexachloroethane | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 3 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 6 | 30 | |
| Isophorone | 1.54 | 0.250 | mg/kg wet | 2.500 | | 62 | 40-140 | 1 | 30 | |
| Naphthalene | 1.81 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | 2 | 30 | |
| Nitrobenzene | 1.65 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | 0.3 | 30 | |
| N-Nitrosodimethylamine | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | 16 | 30 | |
| Pentachlorophenol | 1.81 | 1.00 | mg/kg wet | 2.500 | | 72 | 30-130 | 4 | 30 | |
| Phenanthrene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 3 | 30 | |
| Phenol | 1.61 | 0.250 | mg/kg wet | 2.500 | | 65 | 30-130 | 13 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

## Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8270D Semi-Volatile Organic Compounds | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| Pyrene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 4 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.11* | | mg/kg wet | *2.500* | | *84* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.24* | | mg/kg wet | *3.750* | | *113* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.09* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.36* | | mg/kg wet | *2.500* | | *94* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.60* | | mg/kg wet | *3.750* | | *69* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.78* | | mg/kg wet | *2.500* | | *71* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *2.76* | | mg/kg wet | *3.750* | | *74* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.75* | | mg/kg wet | *2.500* | | *110* | *30-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23K0414

**Notes and Definitions**

| | |
|---|---|
| Z18 | Temperature is not within 23 +/-2 ºC. |
| U | Analyte included in the analysis, but not detected |
| Q | Calibration required quadratic regression (Q). |
| D | Diluted. |
| CD- | Continuing Calibration %Diff/Drift is below control limit (CD-). |
| BT | Benzidine tailing factor >2. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0414

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: Client

ESS Project ID: 23K0414
Date Received: 11/10/2023
Project Due Date: 11/16/2023
Days for Project: 4 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 7.3 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** (Yes) / No / NA
10. Were any analyses received outside of hold time? Yes (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 492598 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 492600 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 492602 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 492603 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 492604 | Yes | N/A | Yes | 8 oz jar | NP | |
| 5 | 492606 | Yes | N/A | Yes | 8 oz jar | NP | |
| 5 | 492607 | Yes | N/A | Yes | 8 oz jar | NP | |
| 6 | 492608 | Yes | N/A | Yes | 8 oz jar | NP | |
| 7 | 492610 | Yes | N/A | Yes | 8 oz jar | NP | |
| 7 | 492611 | Yes | N/A | Yes | 8 oz jar | NP | |
| 8 | 492612 | Yes | N/A | Yes | 8 oz jar | NP | |
| 8 | 492613 | Yes | N/A | Yes | 8 oz jar | NP | |
| 9 | 492614 | Yes | N/A | Yes | 8 oz jar | NP | |
| 9 | 492615 | Yes | N/A | Yes | 8 oz jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials dn

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 23K0414
Date Received: 11/10/2023

| | |
|---|---|
| Are barcode labels on correct containers? | Yes / No |
| Are all Flashpoint stickers attached/container ID # circled? | Yes / No / NA |
| Are all Hex Chrome stickers attached? | Yes / No / NA |
| Are all QC stickers attached? | Yes / No / NA |
| Are VOA stickers attached if bubbles noted? | Yes / No / NA |

Completed By: _____ Date & Time: 11/10/23 1642

Reviewed By: _____ Date & Time: 1711 11/10/23.

# CHAIN OF CUSTODY

ESS Lab # 23K0414 | Page 1 of 1

ESS LABORATORY
185 Frances Avenue
Cranston, RI 02910
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

Turn Time (Days): ☐ > 5 ☐ 5 ☑ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day

Regulatory State: MA Criteria: MCP S-1

Is this project for any of the following?:
☑ CT RCP ☒ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

**ELECTRONIC DELIVERABLES (Final Reports are PDF)**
☑ Limit Checker ☐ State Forms ☐ EQuIS
☑ Excel ☐ State Upload ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

## CLIENT INFORMATION

Client: ~~[illegible]~~ CEC
Address: 31 Bellows Rd
Raynham, MA 02767
Phone: 774-501-2176
Email: jkitchen@cecinc.com
Distribution List: Cdalbello@cecin.com
dbarbosa@cecinc.com

## PROJECT INFORMATION

Project Name: Mass CEC
Project Location: 4 Wright St.-New Bedford, MA
Project Number: 332-344
Project Manager: Jon Kitchen/Cassia Dal Bello
Bill to: Client
PO#:
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

Regular TAT

## REQUESTED ANALYSES

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCBs | MCP Metals | SVOCs | Lead TCLP cdb | | | | | | | | | Total Number of Bottles |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11-9 | 12:45 | Comp | ~~Grab~~ Soil | CEC-1-1 (0-4) | X | X | X | X | | | | | | | | | 1 |
| 2 | 11-9 | 12:50 | Grab | Soil | CEC-1-1 (8-9.5) | X | X | X | | | | | | | | | | 1 |
| 3 | 11-9 | 14:00 | Comp | Soil | CEC-4-1 (0-4) | X | X | X | | | | | | | | | | 2 |
| 4 | 11-9 | 14:05 | Grab | Soil | CEC-4-1 (8-10) | X | X | X | | | | | | | | | | 1 |
| 5 | 11-9 | 15:45 | Comp | Soil | CEC-2-1 (0-4) | X | X | X | X | | | | | | | | | 2 |
| 6 | 11-9 | 15:50 | Grab | Soil | CEC-2-1 (8.8-10) | X | X | X | | | | | | | | | | 1 |
| 7 | 11-10 | 10:05 | Grab | Soil | CEC-5-1 (8-10 | X | X | X | | | | | | | | | | 2 |
| 8 | 11-10 | 10:00 | Comp | Soil | CEC-5-1 (0-4) | X | X | X | | | | | | | | | | 2 |
| 9 | 11-10 | 08:00 | Comp | Soil | CEC-3-1 (0-4) | X | X | X | | | | | | | | | | 2 |
| DDB | [illegible] | | | | | | | | | | | | | | | | | |
| Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | | | | | | J | J | J | | | | | | | | | | |
| Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | | | | | | 10 | 10 | 10 | | | | | | | | | | 14 |
| Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | | | | | | 1 | 1 | 1 | | | | | | | | | | |
| Number of Bottles per Sample: | | | | | | | | | | | | | | | | | | |

Sampled by: Dave Barbosa (DB)

**Chain needs to be filled out neatly and completely for on time delivery.**

**Laboratory Use Only**
Cooler Temperature (°C): 7.3 ice

Comments: * Please specify "Other" preservative and containers types in this space

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

**Dissolved Filtration**
☐ Lab Filter

| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
|---|---|---|---|---|---|---|---|
| [signature] | 11-10-23 | 14:11 | [signature] | | | | |
| **Relinquished by (Signature)** | **Date** | **Time** | **Received by (Signature)** | **Relinquished by (Signature)** | **Date** | **Time** | **Received by (Signature)** |
| | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Michael Avila
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC - New Bedford (332-344)**
**ESS Laboratory Work Order Number: 23K0440**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 12:48 pm, Nov 20, 2023**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

## SAMPLE RECEIPT

The following samples were received on November 13, 2023 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**The cooler temperature was not within the acceptance limit of <6°C, however, samples were delivered on ice and therefore meet regulatory criteria.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 23K0440-01 | CEC-3-3 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0440-02 | CEC-4-3 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0440-03 | CEC-5-3 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0440-04 | CEC-2-3 0-6 | Soil | 6010C, 7471B, 8082A, 8270D |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23K0440

## PROJECT NARRATIVE

**8270D Semi-Volatile Organic Compounds**

| | |
|---|---|
| 23K0440-02 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| 23K0440-04 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| D3K0263-CCV1 | **Calibration required quadratic regression (Q).** |
| | 2,4-Dinitrophenol (89% @ 80-120%), Di-n-octylphthalate (90% @ 80-120%) |
| D3K0263-CCV1 | **Continuing Calibration %Diff/Drift is below control limit (CD-).** |
| | 4-Nitrophenol (38% @ 20%) |
| D3K0263-TUN1 | **Benzidine tailing factor >2.** |

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **23K0440-01 through 23K0440-04**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | (x) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| (x) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes ( ) No (x)* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: November 20, 2023
Printed Name: Laur[illegible] Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-3 0-4
Date Sampled: 11/10/23 14:30
Percent Solids: 89

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.61) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| Arsenic | ND (2.31) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| **Barium** | **20.9** (2.31) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| **Beryllium** | **0.18** (0.10) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| Cadmium | ND (0.46) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| **Chromium** | **5.51** (0.92) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| **Lead** | **7.00** (4.61) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| Mercury | ND (0.034) | | 7471B | | 1 | AFV | 11/14/23 18:06 | 0.66 | 40 | DK31407 |
| **Nickel** | **3.27** (2.31) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| Selenium | ND (4.61) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| Silver | ND (0.46) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| Thallium | ND (4.61) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| **Vanadium** | **10.3** (0.92) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| **Zinc** | **15.3** (2.31) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-3 0-4
Date Sampled: 11/10/23 14:30
Percent Solids: 89
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 11/16/23 4:55 | | DK31412 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 11/16/23 4:55 | | DK31412 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 11/16/23 4:55 | | DK31412 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 11/16/23 4:55 | | DK31412 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 11/16/23 4:55 | | DK31412 |
| Aroclor 1254 | ND (0.06) | | 8082A | | 1 | 11/16/23 4:55 | | DK31412 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 11/16/23 4:55 | | DK31412 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 11/16/23 4:55 | | DK31412 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 11/16/23 4:55 | | DK31412 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *72 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *86 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-3 0-4
Date Sampled: 11/10/23 14:30
Percent Solids: 89
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.11) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.554) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.11) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Acetophenone | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Aniline | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Anthracene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Azobenzene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Benzo(a)pyrene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Benzo(b)fluoranthene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-3 0-4
Date Sampled: 11/10/23 14:30
Percent Solids: 89
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Chrysene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.554) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Fluoranthene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Fluorene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Isophorone | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Naphthalene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.11) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Phenanthrene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Phenol | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Pyrene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *95 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *97 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *92 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-3 0-4
Date Sampled: 11/10/23 14:30
Percent Solids: 89
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *97 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *77 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *86 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *80 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *111 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-3 0-4
Date Sampled: 11/10/23 12:55
Percent Solids: 92

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.59) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| Arsenic | ND (2.30) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| **Barium** | **58.0** (2.30) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| **Beryllium** | **0.19** (0.10) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| Cadmium | ND (0.46) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| **Chromium** | **9.05** (0.92) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| **Lead** | **101** (4.59) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| **Mercury** | **0.294** (0.033) | | 7471B | | 1 | AFV | 11/14/23 18:08 | 0.65 | 40 | DK31407 |
| **Nickel** | **5.83** (2.30) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| Selenium | ND (4.59) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| Silver | ND (0.46) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| Thallium | ND (4.59) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| **Vanadium** | **11.1** (0.92) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| **Zinc** | **75.7** (2.30) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-3 0-4
Date Sampled: 11/10/23 12:55
Percent Solids: 92
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:15 | | DK31412 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:15 | | DK31412 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:15 | | DK31412 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:15 | | DK31412 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:15 | | DK31412 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:15 | | DK31412 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:15 | | DK31412 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:15 | | DK31412 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:15 | | DK31412 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *68 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *68 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-3 0-4
Date Sampled: 11/10/23 12:55
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.077** (0.055) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (2.21) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (1.11) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (2.21) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Acenaphthylene** | **2.60** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Acetophenone | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Aniline | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Anthracene** | **4.89** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Azobenzene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Benzo(a)anthracene** | **13.5** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Benzo(a)pyrene** | **13.2** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Benzo(b)fluoranthene** | **10.0** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Benzo(g,h,i)perylene** | **6.80** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-3 0-4
Date Sampled: 11/10/23 12:55
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Benzo(k)fluoranthene** | **10.5** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Chrysene** | **11.6** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Dibenzo(a,h)Anthracene** | **1.81** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Dibenzofuran** | **0.836** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (1.11) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Fluoranthene** | **25.8** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Fluorene** | **0.878** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Indeno(1,2,3-cd)Pyrene** | **7.93** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Isophorone | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Naphthalene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (2.21) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Phenanthrene** | **19.6** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Phenol | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Pyrene** | **24.8** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *82 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *91 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *79 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-3 0-4
Date Sampled: 11/10/23 12:55
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *86 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *64 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *69 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *67 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *98 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-3 0-4
Date Sampled: 11/10/23 11:30
Percent Solids: 92

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-03
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.26) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| Arsenic | ND (2.13) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| **Barium** | **50.6** (2.13) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| **Beryllium** | **0.16** (0.09) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| Cadmium | ND (0.43) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| **Chromium** | **17.1** (0.85) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| **Lead** | **86.5** (4.26) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| **Mercury** | **0.065** (0.035) | | 7471B | | 1 | AFV | 11/14/23 18:10 | 0.61 | 40 | DK31407 |
| **Nickel** | **10.2** (2.13) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| Selenium | ND (4.26) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| Silver | ND (0.43) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| Thallium | ND (4.26) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| **Vanadium** | **15.7** (0.85) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| **Zinc** | **43.3** (2.13) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-3 0-4
Date Sampled: 11/10/23 11:30
Percent Solids: 92
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 11/17/23 12:24 | | DK31625 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 11/17/23 12:24 | | DK31625 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 11/17/23 12:24 | | DK31625 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 11/17/23 12:24 | | DK31625 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 11/17/23 12:24 | | DK31625 |
| **Aroclor 1254** | **0.3** (0.05) | | 8082A | | 1 | 11/17/23 12:24 | | DK31625 |
| **Aroclor 1260** | **0.1** (0.05) | | 8082A | | 1 | 11/17/23 12:24 | | DK31625 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 11/17/23 12:24 | | DK31625 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 11/17/23 12:24 | | DK31625 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *74 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-3 0-4
Date Sampled: 11/10/23 11:30
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.028** (0.028) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.10) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.552) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.10) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Acenaphthylene** | **0.386** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Acetophenone | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Aniline | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Anthracene** | **0.980** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Azobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Benzo(a)anthracene** | **4.43** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Benzo(a)pyrene** | **5.13** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Benzo(b)fluoranthene** | **4.05** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Benzo(g,h,i)perylene** | **3.54** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-3 0-4
Date Sampled: 11/10/23 11:30
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Benzo(k)fluoranthene** | **3.59** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Chrysene** | **4.21** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Dibenzo(a,h)Anthracene** | **0.747** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.552) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Fluoranthene** | **8.45** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Fluorene** | **0.336** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Indeno(1,2,3-cd)Pyrene** | **3.78** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Isophorone | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Naphthalene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.10) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Phenanthrene** | **3.20** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Phenol | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Pyrene** | **9.13** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *94 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *119 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *90 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-3 0-4
Date Sampled: 11/10/23 11:30
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *101 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *78 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *92 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *80 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *114 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-3 0-6
Date Sampled: 11/13/23 08:15
Percent Solids: 90

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.57) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| **Arsenic** | **3.42** (2.28) | | 6010C | | 1 | CEV | 11/15/23 10:59 | 2.44 | 100 | DK31409 |
| **Barium** | **252** (2.28) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| **Beryllium** | **0.22** (0.10) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| Cadmium | ND (0.46) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| **Chromium** | **9.85** (0.91) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| **Lead** | **113** (4.57) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| **Mercury** | **0.096** (0.032) | | 7471B | | 1 | AFV | 11/14/23 18:12 | 0.69 | 40 | DK31407 |
| **Nickel** | **7.09** (2.28) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| Selenium | ND (4.57) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| Silver | ND (0.46) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| Thallium | ND (4.57) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| **Vanadium** | **15.4** (0.91) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| **Zinc** | **181** (2.28) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-3 0-6
Date Sampled: 11/13/23 08:15
Percent Solids: 90
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:54 | | DK31412 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:54 | | DK31412 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:54 | | DK31412 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:54 | | DK31412 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:54 | | DK31412 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:54 | | DK31412 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:54 | | DK31412 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:54 | | DK31412 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:54 | | DK31412 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *61 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *65 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-3 0-6
Date Sampled: 11/13/23 08:15
Percent Solids: 90
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.084** (0.055) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (2.22) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (1.11) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (2.22) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Acenaphthene** | **0.621** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Acetophenone | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Aniline | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Anthracene** | **1.69** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Azobenzene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Benzo(a)anthracene** | **5.96** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Benzo(a)pyrene** | **6.63** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Benzo(b)fluoranthene** | **5.74** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Benzo(g,h,i)perylene** | **4.14** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-3 0-6
Date Sampled: 11/13/23 08:15
Percent Solids: 90
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Benzo(k)fluoranthene** | **4.55** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Chrysene** | **5.63** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Dibenzo(a,h)Anthracene** | **0.927** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (1.11) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Fluoranthene** | **10.1** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Fluorene** | **0.647** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Indeno(1,2,3-cd)Pyrene** | **4.50** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Isophorone | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Naphthalene** | **0.701** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (2.22) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Phenanthrene** | **6.32** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Phenol | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Pyrene** | **11.6** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *90 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *94 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *91 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-3 0-6
Date Sampled: 11/13/23 08:15
Percent Solids: 90
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *95 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *75 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *76 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *78 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *116 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DK31407 - 7471B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Mercury | ND | 0.032 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Mercury | 9.44 | 3.09 | mg/kg wet | 17.10 | | 55 | 33.1-86.55 | | | |
| **LCS Dup** | | | | | | | | | | |
| Mercury | 9.78 | 3.09 | mg/kg wet | 17.10 | | 57 | 33.1-86.55 | 4 | 30 | |
| **Batch DK31409 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Antimony | ND | 4.27 | mg/kg wet | | | | | | | |
| Arsenic | ND | 2.14 | mg/kg wet | | | | | | | |
| Barium | ND | 2.14 | mg/kg wet | | | | | | | |
| Beryllium | ND | 0.09 | mg/kg wet | | | | | | | |
| Cadmium | ND | 0.43 | mg/kg wet | | | | | | | |
| Chromium | ND | 0.85 | mg/kg wet | | | | | | | |
| Lead | ND | 4.27 | mg/kg wet | | | | | | | |
| Nickel | ND | 2.14 | mg/kg wet | | | | | | | |
| Selenium | ND | 4.27 | mg/kg wet | | | | | | | |
| Silver | ND | 0.43 | mg/kg wet | | | | | | | |
| Thallium | ND | 4.27 | mg/kg wet | | | | | | | |
| Vanadium | ND | 0.85 | mg/kg wet | | | | | | | |
| Zinc | ND | 2.14 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Antimony | 53.8 | 16.7 | mg/kg wet | 54.20 | | 99 | 80-120 | | | |
| Arsenic | 264 | 8.33 | mg/kg wet | 258.0 | | 102 | 80-120 | | | |
| Barium | 853 | 8.33 | mg/kg wet | 809.0 | | 105 | 80-120 | | | |
| Beryllium | 49.9 | 0.37 | mg/kg wet | 48.50 | | 103 | 80-120 | | | |
| Cadmium | 315 | 1.67 | mg/kg wet | 321.0 | | 98 | 80-120 | | | |
| Chromium | 131 | 3.33 | mg/kg wet | 133.0 | | 98 | 80-120 | | | |
| Lead | 105 | 16.7 | mg/kg wet | 102.0 | | 103 | 80-120 | | | |
| Nickel | 146 | 8.33 | mg/kg wet | 137.0 | | 107 | 80-120 | | | |
| Selenium | 49.4 | 16.7 | mg/kg wet | 49.40 | | 100 | 80-120 | | | |
| Silver | 23.5 | 1.67 | mg/kg wet | 22.70 | | 104 | 80-120 | | | |
| Thallium | 83.5 | 16.7 | mg/kg wet | 81.40 | | 103 | 80-120 | | | |
| Vanadium | 102 | 3.33 | mg/kg wet | 108.0 | | 95 | 80-120 | | | |
| Zinc | 528 | 8.33 | mg/kg wet | 540.0 | | 98 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Antimony | 49.2 | 14.9 | mg/kg wet | 54.20 | | 91 | 80-120 | 9 | 30 | |
| Arsenic | 246 | 7.46 | mg/kg wet | 258.0 | | 95 | 80-120 | 7 | 30 | |
| Barium | 776 | 7.46 | mg/kg wet | 809.0 | | 96 | 80-120 | 9 | 30 | |
| Beryllium | 45.9 | 0.33 | mg/kg wet | 48.50 | | 95 | 80-120 | 8 | 20 | |
| Cadmium | 293 | 1.49 | mg/kg wet | 321.0 | | 91 | 80-120 | 7 | 30 | |
| Chromium | 121 | 2.99 | mg/kg wet | 133.0 | | 91 | 80-120 | 8 | 30 | |
| Lead | 98.1 | 14.9 | mg/kg wet | 102.0 | | 96 | 80-120 | 7 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DK31409 - 3050B** | | | | | | | | | | |
| Nickel | 136 | 7.46 | mg/kg wet | 137.0 | | 100 | 80-120 | 7 | 30 | |
| Selenium | 46.6 | 14.9 | mg/kg wet | 49.40 | | 94 | 80-120 | 6 | 30 | |
| Silver | 21.9 | 1.49 | mg/kg wet | 22.70 | | 97 | 80-120 | 7 | 30 | |
| Thallium | 79.1 | 14.9 | mg/kg wet | 81.40 | | 97 | 80-120 | 5 | 30 | |
| Vanadium | 96.0 | 2.99 | mg/kg wet | 108.0 | | 89 | 80-120 | 6 | 30 | |
| Zinc | 492 | 7.46 | mg/kg wet | 540.0 | | 91 | 80-120 | 7 | 30 | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DK31412 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0188* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0201* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | 0.2 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DK31412 - 3540C** | | | | | | | | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | 0.7 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | 1 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 1 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0199* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0201* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **Batch DK31625 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0226* | | mg/kg wet | *0.02500* | | *90* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0223* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0223* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 86 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0212* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0209* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0212* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DK31625 - 3540C** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 86 | 40-140 | 0.2 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 1 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | 0.4 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | 1 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0212* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0211* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0211* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0214* | | mg/kg wet | *0.02500* | | *86* | *30-150* | | | |
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.33* | | mg/kg wet | *2.500* | | *93* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.54* | | mg/kg wet | *3.750* | | *95* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.30* | | mg/kg wet | *3.750* | | *88* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.30* | | mg/kg wet | *2.500* | | *92* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.71* | | mg/kg wet | *3.750* | | *72* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.22* | | mg/kg wet | *2.500* | | *89* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.08* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.99* | | mg/kg wet | *2.500* | | *120* | *30-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.03 | 0.025 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| 1,2-Dichlorobenzene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| 1,3-Dichlorobenzene | 2.06 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 30-130 | | | |
| 2,4-Dichlorophenol | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 30-130 | | | |
| 2,4-Dimethylphenol | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 30-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| 2,4-Dinitrophenol | 1.47 | 1.00 | mg/kg wet | 2.500 | | 59 | 30-130 | | | |
| 2,4-Dinitrotoluene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| 2-Chloronaphthalene | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| 2-Chlorophenol | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 30-130 | | | |
| 2-Methylnaphthalene | 1.84 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| 2-Methylphenol | 1.80 | 0.250 | mg/kg wet | 2.500 | | 72 | 30-130 | | | |
| 2-Nitrophenol | 1.89 | 0.500 | mg/kg wet | 2.500 | | 76 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| 3+4-Methylphenol | 3.64 | 0.250 | mg/kg wet | 5.000 | | 73 | 30-130 | | | |
| 4-Bromophenyl-phenylether | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| 4-Chloroaniline | 1.49 | 0.250 | mg/kg wet | 2.500 | | 60 | 40-140 | | | |
| 4-Nitrophenol | 1.42 | 1.00 | mg/kg wet | 2.500 | | 57 | 30-130 | | | |
| Acenaphthene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Acenaphthylene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Acetophenone | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Aniline | 1.29 | 0.250 | mg/kg wet | 2.500 | | 52 | 40-140 | | | |
| Anthracene | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Azobenzene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Benzo(a)anthracene | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Benzo(a)pyrene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.64 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 1.63 | 0.250 | mg/kg wet | 2.500 | | 65 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 1.86 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.67 | 0.250 | mg/kg wet | 2.500 | | 67 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Butylbenzylphthalate | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Chrysene | 2.34 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| Dibenzofuran | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Diethylphthalate | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Dimethylphthalate | 2.29 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Di-n-butylphthalate | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Di-n-octylphthalate | 2.03 | 0.500 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Fluoranthene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Fluorene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Hexachlorobenzene | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| Hexachlorobutadiene | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Hexachloroethane | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Isophorone | 1.56 | 0.250 | mg/kg wet | 2.500 | | 62 | 40-140 | | | |
| Naphthalene | 1.77 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Nitrobenzene | 1.66 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| N-Nitrosodimethylamine | 1.64 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | | | |
| Pentachlorophenol | 1.73 | 1.00 | mg/kg wet | 2.500 | | 69 | 30-130 | | | |
| Phenanthrene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Phenol | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 30-130 | | | |
| Pyrene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.17* | | mg/kg wet | *2.500* | | *87* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.97* | | mg/kg wet | *3.750* | | *106* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.17* | | mg/kg wet | *3.750* | | *85* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.30* | | mg/kg wet | *2.500* | | *92* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.85* | | mg/kg wet | *3.750* | | *76* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.84* | | mg/kg wet | *2.500* | | *74* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *2.89* | | mg/kg wet | *3.750* | | *77* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.64* | | mg/kg wet | *2.500* | | *106* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.16 | 0.025 | mg/kg wet | 2.500 | | 86 | 40-140 | 6 | 30 | |
| 1,2,4-Trichlorobenzene | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 5 | 30 | |
| 1,2-Dichlorobenzene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 2 | 30 | |
| 1,3-Dichlorobenzene | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 0.4 | 30 | |
| 1,4-Dichlorobenzene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 0.4 | 30 | |
| 2,4,5-Trichlorophenol | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 30-130 | 7 | 30 | |
| 2,4,6-Trichlorophenol | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 30-130 | 6 | 30 | |
| 2,4-Dichlorophenol | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 30-130 | 5 | 30 | |
| 2,4-Dimethylphenol | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 30-130 | 5 | 30 | |
| 2,4-Dinitrophenol | 1.70 | 1.00 | mg/kg wet | 2.500 | | 68 | 30-130 | 15 | 30 | |
| 2,4-Dinitrotoluene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 8 | 30 | |
| 2,6-Dinitrotoluene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 7 | 30 | |
| 2-Chloronaphthalene | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 2 | 30 | |
| 2-Chlorophenol | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 30-130 | 0.2 | 30 | |
| 2-Methylnaphthalene | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | 3 | 30 | |
| 2-Methylphenol | 1.79 | 0.250 | mg/kg wet | 2.500 | | 71 | 30-130 | 0.9 | 30 | |
| 2-Nitrophenol | 1.99 | 0.500 | mg/kg wet | 2.500 | | 79 | 30-130 | 5 | 30 | |
| 3,3´-Dichlorobenzidine | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 8 | 30 | |
| 3+4-Methylphenol | 3.62 | 0.250 | mg/kg wet | 5.000 | | 72 | 30-130 | 0.5 | 30 | |
| 4-Bromophenyl-phenylether | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | 9 | 30 | |
| 4-Chloroaniline | 1.50 | 0.250 | mg/kg wet | 2.500 | | 60 | 40-140 | 1 | 30 | |
| 4-Nitrophenol | 1.40 | 1.00 | mg/kg wet | 2.500 | | 56 | 30-130 | 2 | 30 | |
| Acenaphthene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 5 | 30 | |
| Acenaphthylene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 5 | 30 | |
| Acetophenone | 1.71 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | 4 | 30 | |
| Aniline | 1.36 | 0.250 | mg/kg wet | 2.500 | | 55 | 40-140 | 5 | 30 | |
| Anthracene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 2 | 30 | |
| Azobenzene | 1.86 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | 7 | 30 | |
| Benzo(a)anthracene | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 6 | 30 | |
| Benzo(a)pyrene | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 7 | 30 | |
| Benzo(b)fluoranthene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 6 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| Benzo(g,h,i)perylene | 2.89 | 0.250 | mg/kg wet | 2.500 | | 116 | 40-140 | 9 | 30 | |
| Benzo(k)fluoranthene | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 7 | 30 | |
| bis(2-Chloroethoxy)methane | 1.63 | 0.250 | mg/kg wet | 2.500 | | 65 | 40-140 | 0.03 | 30 | |
| bis(2-Chloroethyl)ether | 1.67 | 0.250 | mg/kg wet | 2.500 | | 67 | 40-140 | 11 | 30 | |
| bis(2-chloroisopropyl)Ether | 1.64 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | 2 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 3 | 30 | |
| Butylbenzylphthalate | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 4 | 30 | |
| Chrysene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 6 | 30 | |
| Dibenzo(a,h)Anthracene | 2.82 | 0.250 | mg/kg wet | 2.500 | | 113 | 40-140 | 7 | 30 | |
| Dibenzofuran | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 4 | 30 | |
| Diethylphthalate | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 1 | 30 | |
| Dimethylphthalate | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 4 | 30 | |
| Di-n-butylphthalate | 2.26 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 0.9 | 30 | |
| Di-n-octylphthalate | 2.12 | 0.500 | mg/kg wet | 2.500 | | 85 | 40-140 | 4 | 30 | |
| Fluoranthene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 2 | 30 | |
| Fluorene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 3 | 30 | |
| Hexachlorobenzene | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 3 | 30 | |
| Hexachlorobutadiene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 4 | 30 | |
| Hexachloroethane | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 3 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 6 | 30 | |
| Isophorone | 1.54 | 0.250 | mg/kg wet | 2.500 | | 62 | 40-140 | 1 | 30 | |
| Naphthalene | 1.81 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | 2 | 30 | |
| Nitrobenzene | 1.65 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | 0.3 | 30 | |
| N-Nitrosodimethylamine | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | 16 | 30 | |
| Pentachlorophenol | 1.81 | 1.00 | mg/kg wet | 2.500 | | 72 | 30-130 | 4 | 30 | |
| Phenanthrene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 3 | 30 | |
| Phenol | 1.61 | 0.250 | mg/kg wet | 2.500 | | 65 | 30-130 | 13 | 30 | |
| Pyrene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 4 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.11* | | mg/kg wet | *2.500* | | *84* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.24* | | mg/kg wet | *3.750* | | *113* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.09* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.36* | | mg/kg wet | *2.500* | | *94* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.60* | | mg/kg wet | *3.750* | | *69* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.78* | | mg/kg wet | *2.500* | | *71* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *2.76* | | mg/kg wet | *3.750* | | *74* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.75* | | mg/kg wet | *2.500* | | *110* | *30-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23K0440

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| Q | Calibration required quadratic regression (Q). |
| EL | Elevated Method Reporting Limits due to sample matrix (EL). |
| D | Diluted. |
| CD- | Continuing Calibration %Diff/Drift is below control limit (CD-). |
| BT | Benzidine tailing factor >2. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: Client

ESS Project ID: 23K0440
Date Received: 11/13/2023
Project Due Date: 11/20/2023
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 7.1 Iced with: Ice Pack
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 493038 | Yes | N/A | Yes | 8 oz jar | NP | |
| 1 | 493039 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 493040 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 493041 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 493042 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 493043 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 493044 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 493045 | Yes | N/A | Yes | 8 oz jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials TD
Are barcode labels on correct containers? Yes / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 23K0440

Date Received: 11/13/2023

By: [signature] Date & Time: 11/13/23 1555

Reviewed By: [signature] Date & Time: 11/13/23 16:00

# CHAIN OF CUSTODY

ESS Lab # 23610440 | Page 1 of 1

ESS LABORATORY
185 Frances Avenue
Cranston, RI 02910
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

Turn Time (Days) ☐ > 5 ☒ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day
Regulatory State: MA Criteria: MCP S-1
Is this project for any of the following?:
☑ CT RCP ☒ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF)
☑ Limit Checker ☐ State Forms ☐ EQuIS
☑ Excel ☐ State Upload ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

## CLIENT INFORMATION

Client: CEC
Address: 31 Bellows Rd Raynham, MA
Phone: 774-501-2176
Email Distribution List: jkitchen@cecinc.com cdalbello@cecinc.com

## PROJECT INFORMATION

Project Name: Mass CEC
Project Location: 4 Wright St. - New Bedford
Project Number: 332-344
Project Manager: Jon Kitchen/Cassia Dal Bello
Bill to: client
PO#: 332-344
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

## REQUESTED ANALYSES

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCBs | * MCP Metals | SVOCs | Total Number of Bottles |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 11-10 | 14:30 | Comp | Soil | CEC-3-3 (0-4) | X | X | X | 2 |
| 2 | 11-10 | 12:55 | Comp | Soil | CEC-4-3 (0-4) | X | X | X | 2 |
| 3 | 11-10 | 11:30 | Comp | Soil | CEC-5-3 (0-4) | X | X | X | 2 |
| - | | | | | | | | | |
| - | | | | | | | | | |
| 4 | 11-13 | 8:15 | Comp | Soil | CEC-2-3 (0-6) | X | X | X | 2 |

| | | |
|---|---|---|
| Container Type: | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | J |
| Container Volume: | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | 10 |
| Preservation Code: | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | 1 |
| | Number of Bottles per Sample: | 8 |

Sampled by: DAVE BARBOZA (DB)

**Chain needs to be filled out neatly and completely for on time delivery.**

Laboratory Use Only
Cooler Temperature (°C): 7.1 icepk

Comments: * Please specify "Other" preservative and containers types in this space

*MCP 14 Metals - Per Client EO 11/14/2023

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration
☐ Lab Filter

| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
|---|---|---|---|---|---|---|---|
| | 11-13-23 | 15:20 | | | | | |
| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
| | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Michael Avila
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC - New Bedford (332-344)**
**ESS Laboratory Work Order Number: 23K0440**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 2:45 pm, Dec 05, 2023**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

## SAMPLE RECEIPT

The following samples were received on November 13, 2023 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**The cooler temperature was not within the acceptance limit of <6°C, however, samples were delivered on ice and therefore meet regulatory criteria.**

**Revision 1 December 5, 2023: This report has been revised to include TCLP lead on 23K0440-02 and -04.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 23K0440-01 | CEC-3-3 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0440-02 | CEC-4-3 0-4 | Soil | 1311, 1311/6010C, 6010C, 7471B, 8082A, 8270D |
| 23K0440-03 | CEC-5-3 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0440-04 | CEC-2-3 0-6 | Soil | 1311, 1311/6010C, 6010C, 7471B, 8082A, 8270D |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23K0440

## PROJECT NARRATIVE

**8270D Semi-Volatile Organic Compounds**

| | |
|---|---|
| 23K0440-02 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| 23K0440-04 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| D3K0263-CCV1 | **Calibration required quadratic regression (Q).** |
| | 2,4-Dinitrophenol (89% @ 80-120%), Di-n-octylphthalate (90% @ 80-120%) |
| D3K0263-CCV1 | **Continuing Calibration %Diff/Drift is below control limit (CD-).** |
| | 4-Nitrophenol (38% @ 20%) |
| D3K0263-TUN1 | **Benzidine tailing factor >2.** |

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **23K0440-01 through 23K0440-04**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | (x) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| (x) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes ( ) No (x)* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: November 20, 2023
Printed Name: Laur[illegible] Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-3 0-4
Date Sampled: 11/10/23 14:30
Percent Solids: 89

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.61) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| Arsenic | ND (2.31) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| **Barium** | **20.9** (2.31) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| **Beryllium** | **0.18** (0.10) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| Cadmium | ND (0.46) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| **Chromium** | **5.51** (0.92) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| **Lead** | **7.00** (4.61) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| Mercury | ND (0.034) | | 7471B | | 1 | AFV | 11/14/23 18:06 | 0.66 | 40 | DK31407 |
| **Nickel** | **3.27** (2.31) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| Selenium | ND (4.61) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| Silver | ND (0.46) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| Thallium | ND (4.61) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| **Vanadium** | **10.3** (0.92) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |
| **Zinc** | **15.3** (2.31) | | 6010C | | 1 | CEV | 11/14/23 17:09 | 2.45 | 100 | DK31409 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-3 0-4
Date Sampled: 11/10/23 14:30
Percent Solids: 89
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 11/16/23 4:55 | | DK31412 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 11/16/23 4:55 | | DK31412 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 11/16/23 4:55 | | DK31412 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 11/16/23 4:55 | | DK31412 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 11/16/23 4:55 | | DK31412 |
| Aroclor 1254 | ND (0.06) | | 8082A | | 1 | 11/16/23 4:55 | | DK31412 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 11/16/23 4:55 | | DK31412 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 11/16/23 4:55 | | DK31412 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 11/16/23 4:55 | | DK31412 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *72 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *86 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-3 0-4
Date Sampled: 11/10/23 14:30
Percent Solids: 89
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.11) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.554) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.11) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Acetophenone | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Aniline | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Anthracene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Azobenzene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Benzo(a)anthracene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Benzo(a)pyrene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Benzo(b)fluoranthene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-3 0-4
Date Sampled: 11/10/23 14:30
Percent Solids: 89
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Chrysene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.554) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Fluoranthene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Fluorene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Isophorone | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Naphthalene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.11) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Phenanthrene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Phenol | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |
| Pyrene | ND (0.277) | | 8270D | | 1 | 11/14/23 0:00 | D3K0263 | DK31306 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *95 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *97 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *92 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-3 0-4
Date Sampled: 11/10/23 14:30
Percent Solids: 89
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *97 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *77 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *86 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *80 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *111 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-3 0-4
Date Sampled: 11/10/23 12:55
Percent Solids: 92

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.59) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| Arsenic | ND (2.30) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| **Barium** | **58.0** (2.30) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| **Beryllium** | **0.19** (0.10) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| Cadmium | ND (0.46) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| **Chromium** | **9.05** (0.92) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| **Lead** | **101** (4.59) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| **Mercury** | **0.294** (0.033) | | 7471B | | 1 | AFV | 11/14/23 18:08 | 0.65 | 40 | DK31407 |
| **Nickel** | **5.83** (2.30) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| Selenium | ND (4.59) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| Silver | ND (0.46) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| Thallium | ND (4.59) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| **Vanadium** | **11.1** (0.92) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |
| **Zinc** | **75.7** (2.30) | | 6010C | | 1 | CEV | 11/14/23 17:11 | 2.36 | 100 | DK31409 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-3 0-4
Date Sampled: 11/10/23 12:55
Percent Solids: 92

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-02
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.282** (0.050) | | 1311/6010C | | 1 | CEV/KJB | 11/29/23 21:03 | 50 | 50 | DK32917 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-3 0-4
Date Sampled: 11/10/23 12:55
Percent Solids: 92
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:15 | | DK31412 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:15 | | DK31412 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:15 | | DK31412 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:15 | | DK31412 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:15 | | DK31412 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:15 | | DK31412 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:15 | | DK31412 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:15 | | DK31412 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:15 | | DK31412 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *68 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *68 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-3 0-4
Date Sampled: 11/10/23 12:55
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.077** (0.055) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (2.21) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (1.11) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (2.21) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Acenaphthylene** | **2.60** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Acetophenone | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Aniline | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Anthracene** | **4.89** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Azobenzene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Benzo(a)anthracene** | **13.5** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Benzo(a)pyrene** | **13.2** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Benzo(b)fluoranthene** | **10.0** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Benzo(g,h,i)perylene** | **6.80** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-3 0-4
Date Sampled: 11/10/23 12:55
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Benzo(k)fluoranthene** | **10.5** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Chrysene** | **11.6** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Dibenzo(a,h)Anthracene** | **1.81** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Dibenzofuran** | **0.836** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (1.11) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Fluoranthene** | **25.8** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Fluorene** | **0.878** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Indeno(1,2,3-cd)Pyrene** | **7.93** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Isophorone | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Naphthalene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (2.21) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Phenanthrene** | **19.6** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| Phenol | ND (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |
| **Pyrene** | **24.8** (0.553) | | 8270D | | 2 | 11/14/23 0:30 | D3K0263 | DK31306 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *82 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *91 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *79 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-3 0-4
Date Sampled: 11/10/23 12:55
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *86 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *64 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *69 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *67 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *98 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-3 0-4
Date Sampled: 11/10/23 12:55
Percent Solids: 92
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-02
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 11/28/23 17:03

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Batch |
|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **20.1** (N/A) | | 1311 | | 1 | RAP | 11/29/23 9:06 | DK32850 |
| **Temperature (Max C)** | **21.5** (N/A) | | 1311 | | 1 | RAP | 11/29/23 9:06 | DK32850 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-3 0-4
Date Sampled: 11/10/23 11:30
Percent Solids: 92

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-03
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.26) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| Arsenic | ND (2.13) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| **Barium** | **50.6** (2.13) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| **Beryllium** | **0.16** (0.09) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| Cadmium | ND (0.43) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| **Chromium** | **17.1** (0.85) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| **Lead** | **86.5** (4.26) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| **Mercury** | **0.065** (0.035) | | 7471B | | 1 | AFV | 11/14/23 18:10 | 0.61 | 40 | DK31407 |
| **Nickel** | **10.2** (2.13) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| Selenium | ND (4.26) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| Silver | ND (0.43) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| Thallium | ND (4.26) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| **Vanadium** | **15.7** (0.85) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |
| **Zinc** | **43.3** (2.13) | | 6010C | | 1 | CEV | 11/14/23 17:13 | 2.54 | 100 | DK31409 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-3 0-4
Date Sampled: 11/10/23 11:30
Percent Solids: 92
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 11/17/23 12:24 | | DK31625 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 11/17/23 12:24 | | DK31625 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 11/17/23 12:24 | | DK31625 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 11/17/23 12:24 | | DK31625 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 11/17/23 12:24 | | DK31625 |
| **Aroclor 1254** | **0.3** (0.05) | | 8082A | | 1 | 11/17/23 12:24 | | DK31625 |
| **Aroclor 1260** | **0.1** (0.05) | | 8082A | | 1 | 11/17/23 12:24 | | DK31625 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 11/17/23 12:24 | | DK31625 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 11/17/23 12:24 | | DK31625 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *74 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-3 0-4
Date Sampled: 11/10/23 11:30
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.028** (0.028) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.10) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.552) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.10) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Acenaphthylene** | **0.386** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Acetophenone | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Aniline | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Anthracene** | **0.980** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Azobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Benzo(a)anthracene** | **4.43** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Benzo(a)pyrene** | **5.13** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Benzo(b)fluoranthene** | **4.05** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Benzo(g,h,i)perylene** | **3.54** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-3 0-4
Date Sampled: 11/10/23 11:30
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Benzo(k)fluoranthene** | **3.59** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Chrysene** | **4.21** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Dibenzo(a,h)Anthracene** | **0.747** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.552) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Fluoranthene** | **8.45** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Fluorene** | **0.336** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Indeno(1,2,3-cd)Pyrene** | **3.78** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Isophorone | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Naphthalene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.10) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Phenanthrene** | **3.20** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| Phenol | ND (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |
| **Pyrene** | **9.13** (0.276) | | 8270D | | 1 | 11/14/23 1:01 | D3K0263 | DK31306 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *94 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *119 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *90 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-3 0-4
Date Sampled: 11/10/23 11:30
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *101 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *78 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *92 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *80 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *114 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-3 0-6
Date Sampled: 11/13/23 08:15
Percent Solids: 90

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.57) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| **Arsenic** | **3.42** (2.28) | | 6010C | | 1 | CEV | 11/15/23 10:59 | 2.44 | 100 | DK31409 |
| **Barium** | **252** (2.28) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| **Beryllium** | **0.22** (0.10) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| Cadmium | ND (0.46) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| **Chromium** | **9.85** (0.91) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| **Lead** | **113** (4.57) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| **Mercury** | **0.096** (0.032) | | 7471B | | 1 | AFV | 11/14/23 18:12 | 0.69 | 40 | DK31407 |
| **Nickel** | **7.09** (2.28) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| Selenium | ND (4.57) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| Silver | ND (0.46) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| Thallium | ND (4.57) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| **Vanadium** | **15.4** (0.91) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |
| **Zinc** | **181** (2.28) | | 6010C | | 1 | CEV | 11/14/23 17:15 | 2.44 | 100 | DK31409 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-3 0-6
Date Sampled: 11/13/23 08:15
Percent Solids: 90

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-04
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.171** (0.050) | | 1311/6010C | | 1 | CEV/KJB | 11/29/23 21:06 | 50 | 50 | DK32917 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-3 0-6
Date Sampled: 11/13/23 08:15
Percent Solids: 90
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/14/23 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:54 | | DK31412 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:54 | | DK31412 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:54 | | DK31412 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:54 | | DK31412 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:54 | | DK31412 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:54 | | DK31412 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:54 | | DK31412 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:54 | | DK31412 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 11/16/23 5:54 | | DK31412 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *61 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *65 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-3 0-6
Date Sampled: 11/13/23 08:15
Percent Solids: 90
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.084** (0.055) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (2.22) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (1.11) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (2.22) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Acenaphthene** | **0.621** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Acetophenone | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Aniline | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Anthracene** | **1.69** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Azobenzene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Benzo(a)anthracene** | **5.96** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Benzo(a)pyrene** | **6.63** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Benzo(b)fluoranthene** | **5.74** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Benzo(g,h,i)perylene** | **4.14** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-3 0-6
Date Sampled: 11/13/23 08:15
Percent Solids: 90
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Benzo(k)fluoranthene** | **4.55** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Chrysene** | **5.63** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Dibenzo(a,h)Anthracene** | **0.927** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (1.11) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Fluoranthene** | **10.1** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Fluorene** | **0.647** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Indeno(1,2,3-cd)Pyrene** | **4.50** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Isophorone | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Naphthalene** | **0.701** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (2.22) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Phenanthrene** | **6.32** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| Phenol | ND (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |
| **Pyrene** | **11.6** (0.554) | | 8270D | | 2 | 11/14/23 1:32 | D3K0263 | DK31306 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *90 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *94 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *91 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-3 0-6
Date Sampled: 11/13/23 08:15
Percent Solids: 90
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *95 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *75 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *76 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *78 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *116 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-3 0-6
Date Sampled: 11/13/23 08:15
Percent Solids: 90
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 23K0440
ESS Laboratory Sample ID: 23K0440-04
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 11/28/23 17:03

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Batch |
|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **20.1** (N/A) | | 1311 | | 1 | RAP | 11/29/23 9:06 | DK32850 |
| **Temperature (Max C)** | **21.5** (N/A) | | 1311 | | 1 | RAP | 11/29/23 9:06 | DK32850 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DK31407 - 7471B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Mercury | ND | 0.032 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Mercury | 9.44 | 3.09 | mg/kg wet | 17.10 | | 55 | 33.1-86.55 | | | |
| **LCS Dup** | | | | | | | | | | |
| Mercury | 9.78 | 3.09 | mg/kg wet | 17.10 | | 57 | 33.1-86.55 | 4 | 30 | |
| **Batch DK31409 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Antimony | ND | 4.27 | mg/kg wet | | | | | | | |
| Arsenic | ND | 2.14 | mg/kg wet | | | | | | | |
| Barium | ND | 2.14 | mg/kg wet | | | | | | | |
| Beryllium | ND | 0.09 | mg/kg wet | | | | | | | |
| Cadmium | ND | 0.43 | mg/kg wet | | | | | | | |
| Chromium | ND | 0.85 | mg/kg wet | | | | | | | |
| Lead | ND | 4.27 | mg/kg wet | | | | | | | |
| Nickel | ND | 2.14 | mg/kg wet | | | | | | | |
| Selenium | ND | 4.27 | mg/kg wet | | | | | | | |
| Silver | ND | 0.43 | mg/kg wet | | | | | | | |
| Thallium | ND | 4.27 | mg/kg wet | | | | | | | |
| Vanadium | ND | 0.85 | mg/kg wet | | | | | | | |
| Zinc | ND | 2.14 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Antimony | 53.8 | 16.7 | mg/kg wet | 54.20 | | 99 | 80-120 | | | |
| Arsenic | 264 | 8.33 | mg/kg wet | 258.0 | | 102 | 80-120 | | | |
| Barium | 853 | 8.33 | mg/kg wet | 809.0 | | 105 | 80-120 | | | |
| Beryllium | 49.9 | 0.37 | mg/kg wet | 48.50 | | 103 | 80-120 | | | |
| Cadmium | 315 | 1.67 | mg/kg wet | 321.0 | | 98 | 80-120 | | | |
| Chromium | 131 | 3.33 | mg/kg wet | 133.0 | | 98 | 80-120 | | | |
| Lead | 105 | 16.7 | mg/kg wet | 102.0 | | 103 | 80-120 | | | |
| Nickel | 146 | 8.33 | mg/kg wet | 137.0 | | 107 | 80-120 | | | |
| Selenium | 49.4 | 16.7 | mg/kg wet | 49.40 | | 100 | 80-120 | | | |
| Silver | 23.5 | 1.67 | mg/kg wet | 22.70 | | 104 | 80-120 | | | |
| Thallium | 83.5 | 16.7 | mg/kg wet | 81.40 | | 103 | 80-120 | | | |
| Vanadium | 102 | 3.33 | mg/kg wet | 108.0 | | 95 | 80-120 | | | |
| Zinc | 528 | 8.33 | mg/kg wet | 540.0 | | 98 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Antimony | 49.2 | 14.9 | mg/kg wet | 54.20 | | 91 | 80-120 | 9 | 30 | |
| Arsenic | 246 | 7.46 | mg/kg wet | 258.0 | | 95 | 80-120 | 7 | 30 | |
| Barium | 776 | 7.46 | mg/kg wet | 809.0 | | 96 | 80-120 | 9 | 30 | |
| Beryllium | 45.9 | 0.33 | mg/kg wet | 48.50 | | 95 | 80-120 | 8 | 20 | |
| Cadmium | 293 | 1.49 | mg/kg wet | 321.0 | | 91 | 80-120 | 7 | 30 | |
| Chromium | 121 | 2.99 | mg/kg wet | 133.0 | | 91 | 80-120 | 8 | 30 | |
| Lead | 98.1 | 14.9 | mg/kg wet | 102.0 | | 96 | 80-120 | 7 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DK31409 - 3050B** | | | | | | | | | | |
| Nickel | 136 | 7.46 | mg/kg wet | 137.0 | | 100 | 80-120 | 7 | 30 | |
| Selenium | 46.6 | 14.9 | mg/kg wet | 49.40 | | 94 | 80-120 | 6 | 30 | |
| Silver | 21.9 | 1.49 | mg/kg wet | 22.70 | | 97 | 80-120 | 7 | 30 | |
| Thallium | 79.1 | 14.9 | mg/kg wet | 81.40 | | 97 | 80-120 | 5 | 30 | |
| Vanadium | 96.0 | 2.99 | mg/kg wet | 108.0 | | 89 | 80-120 | 6 | 30 | |
| Zinc | 492 | 7.46 | mg/kg wet | 540.0 | | 91 | 80-120 | 7 | 30 | |
| **1311 TCLP Metals** | | | | | | | | | | |
| **Batch DK32917 - 3005A_TCLP** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 0.050 | mg/L | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 0.446 | 0.050 | mg/L | 0.5000 | | 89 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 0.437 | 0.050 | mg/L | 0.5000 | | 87 | 80-120 | 2 | 20 | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DK31412 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | 0.2 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | 0.7 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DK31412 - 3540C** | | | | | | | | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | 1 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 1 | 30 | |
| **Batch DK31625 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 86 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 86 | 40-140 | 0.2 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 1 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | 0.4 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | 1 | 30 | |
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8270D Semi-Volatile Organic Compounds | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.03 | 0.025 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| 1,2-Dichlorobenzene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| 1,3-Dichlorobenzene | 2.06 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 30-130 | | | |
| 2,4-Dichlorophenol | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 30-130 | | | |
| 2,4-Dimethylphenol | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 30-130 | | | |
| 2,4-Dinitrophenol | 1.47 | 1.00 | mg/kg wet | 2.500 | | 59 | 30-130 | | | |
| 2,4-Dinitrotoluene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| 2-Chloronaphthalene | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| 2-Chlorophenol | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 30-130 | | | |
| 2-Methylnaphthalene | 1.84 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| 2-Methylphenol | 1.80 | 0.250 | mg/kg wet | 2.500 | | 72 | 30-130 | | | |
| 2-Nitrophenol | 1.89 | 0.500 | mg/kg wet | 2.500 | | 76 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| 3+4-Methylphenol | 3.64 | 0.250 | mg/kg wet | 5.000 | | 73 | 30-130 | | | |
| 4-Bromophenyl-phenylether | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| 4-Chloroaniline | 1.49 | 0.250 | mg/kg wet | 2.500 | | 60 | 40-140 | | | |
| 4-Nitrophenol | 1.42 | 1.00 | mg/kg wet | 2.500 | | 57 | 30-130 | | | |
| Acenaphthene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Acenaphthylene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Acetophenone | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Aniline | 1.29 | 0.250 | mg/kg wet | 2.500 | | 52 | 40-140 | | | |
| Anthracene | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Azobenzene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Benzo(a)anthracene | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Benzo(a)pyrene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.64 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 1.63 | 0.250 | mg/kg wet | 2.500 | | 65 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 1.86 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.67 | 0.250 | mg/kg wet | 2.500 | | 67 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Butylbenzylphthalate | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| Chrysene | 2.34 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| Dibenzofuran | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Diethylphthalate | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Dimethylphthalate | 2.29 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Di-n-butylphthalate | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Di-n-octylphthalate | 2.03 | 0.500 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Fluoranthene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Fluorene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Hexachlorobenzene | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| Hexachlorobutadiene | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Hexachloroethane | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Isophorone | 1.56 | 0.250 | mg/kg wet | 2.500 | | 62 | 40-140 | | | |
| Naphthalene | 1.77 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Nitrobenzene | 1.66 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | | | |
| N-Nitrosodimethylamine | 1.64 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | | | |
| Pentachlorophenol | 1.73 | 1.00 | mg/kg wet | 2.500 | | 69 | 30-130 | | | |
| Phenanthrene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Phenol | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 30-130 | | | |
| Pyrene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.16 | 0.025 | mg/kg wet | 2.500 | | 86 | 40-140 | 6 | 30 | |
| 1,2,4-Trichlorobenzene | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 5 | 30 | |
| 1,2-Dichlorobenzene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 2 | 30 | |
| 1,3-Dichlorobenzene | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 0.4 | 30 | |
| 1,4-Dichlorobenzene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 0.4 | 30 | |
| 2,4,5-Trichlorophenol | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 30-130 | 7 | 30 | |
| 2,4,6-Trichlorophenol | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 30-130 | 6 | 30 | |
| 2,4-Dichlorophenol | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 30-130 | 5 | 30 | |
| 2,4-Dimethylphenol | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 30-130 | 5 | 30 | |
| 2,4-Dinitrophenol | 1.70 | 1.00 | mg/kg wet | 2.500 | | 68 | 30-130 | 15 | 30 | |
| 2,4-Dinitrotoluene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 8 | 30 | |
| 2,6-Dinitrotoluene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 7 | 30 | |
| 2-Chloronaphthalene | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 2 | 30 | |
| 2-Chlorophenol | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 30-130 | 0.2 | 30 | |
| 2-Methylnaphthalene | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | 3 | 30 | |
| 2-Methylphenol | 1.79 | 0.250 | mg/kg wet | 2.500 | | 71 | 30-130 | 0.9 | 30 | |
| 2-Nitrophenol | 1.99 | 0.500 | mg/kg wet | 2.500 | | 79 | 30-130 | 5 | 30 | |
| 3,3´-Dichlorobenzidine | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 8 | 30 | |
| 3+4-Methylphenol | 3.62 | 0.250 | mg/kg wet | 5.000 | | 72 | 30-130 | 0.5 | 30 | |
| 4-Bromophenyl-phenylether | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | 9 | 30 | |
| 4-Chloroaniline | 1.50 | 0.250 | mg/kg wet | 2.500 | | 60 | 40-140 | 1 | 30 | |
| 4-Nitrophenol | 1.40 | 1.00 | mg/kg wet | 2.500 | | 56 | 30-130 | 2 | 30 | |
| Acenaphthene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 5 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| Acenaphthylene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 5 | 30 | |
| Acetophenone | 1.71 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | 4 | 30 | |
| Aniline | 1.36 | 0.250 | mg/kg wet | 2.500 | | 55 | 40-140 | 5 | 30 | |
| Anthracene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 2 | 30 | |
| Azobenzene | 1.86 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | 7 | 30 | |
| Benzo(a)anthracene | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 6 | 30 | |
| Benzo(a)pyrene | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 7 | 30 | |
| Benzo(b)fluoranthene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 6 | 30 | |
| Benzo(g,h,i)perylene | 2.89 | 0.250 | mg/kg wet | 2.500 | | 116 | 40-140 | 9 | 30 | |
| Benzo(k)fluoranthene | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 7 | 30 | |
| bis(2-Chloroethoxy)methane | 1.63 | 0.250 | mg/kg wet | 2.500 | | 65 | 40-140 | 0.03 | 30 | |
| bis(2-Chloroethyl)ether | 1.67 | 0.250 | mg/kg wet | 2.500 | | 67 | 40-140 | 11 | 30 | |
| bis(2-chloroisopropyl)Ether | 1.64 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | 2 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 3 | 30 | |
| Butylbenzylphthalate | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 4 | 30 | |
| Chrysene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 6 | 30 | |
| Dibenzo(a,h)Anthracene | 2.82 | 0.250 | mg/kg wet | 2.500 | | 113 | 40-140 | 7 | 30 | |
| Dibenzofuran | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 4 | 30 | |
| Diethylphthalate | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 1 | 30 | |
| Dimethylphthalate | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 4 | 30 | |
| Di-n-butylphthalate | 2.26 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 0.9 | 30 | |
| Di-n-octylphthalate | 2.12 | 0.500 | mg/kg wet | 2.500 | | 85 | 40-140 | 4 | 30 | |
| Fluoranthene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 2 | 30 | |
| Fluorene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 3 | 30 | |
| Hexachlorobenzene | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 3 | 30 | |
| Hexachlorobutadiene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 4 | 30 | |
| Hexachloroethane | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 3 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 6 | 30 | |
| Isophorone | 1.54 | 0.250 | mg/kg wet | 2.500 | | 62 | 40-140 | 1 | 30 | |
| Naphthalene | 1.81 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | 2 | 30 | |
| Nitrobenzene | 1.65 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | 0.3 | 30 | |
| N-Nitrosodimethylamine | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | 16 | 30 | |
| Pentachlorophenol | 1.81 | 1.00 | mg/kg wet | 2.500 | | 72 | 30-130 | 4 | 30 | |
| Phenanthrene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 3 | 30 | |
| Phenol | 1.61 | 0.250 | mg/kg wet | 2.500 | | 65 | 30-130 | 13 | 30 | |
| Pyrene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 4 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23K0440

**Notes and Definitions**

| | |
|---|---|
| Z18 | Temperature is not within 23 +/-2 ºC. |
| U | Analyte included in the analysis, but not detected |
| Q | Calibration required quadratic regression (Q). |
| EL | Elevated Method Reporting Limits due to sample matrix (EL). |
| D | Diluted. |
| CD- | Continuing Calibration %Diff/Drift is below control limit (CD-). |
| BT | Benzidine tailing factor >2. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0440

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: Client

ESS Project ID: 23K0440
Date Received: 11/13/2023
Project Due Date: 11/20/2023
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 7.1 Iced with: Ice Pack
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 493038 | Yes | N/A | Yes | 8 oz jar | NP | |
| 1 | 493039 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 493040 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 493041 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 493042 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 493043 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 493044 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 493045 | Yes | N/A | Yes | 8 oz jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials TD
Are barcode labels on correct containers? Yes / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 23K0440

Date Received: 11/13/2023

By: Taylor Davis Date & Time: 11/13/23 1555

Reviewed By: Date & Time: 11/13/23 16:00

# CHAIN OF CUSTODY

ESS Lab # 73650440 | Page 1 of 1

ESS LABORATORY
185 Frances Avenue
Cranston, RI 02910
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

Turn Time (Days): ☐ > 5 ☒ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day

Regulatory State: MA Criteria: MCP S-1

Is this project for any of the following?:
☑ CT RCP ☒ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF)
☑ Limit Checker ☐ State Forms ☐ EQuIS
☑ Excel ☐ State Upload ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

## CLIENT INFORMATION

Client: CEC
Address: 31 Bellows Rd Raynham, MA
Phone: 774-501-2176
Email Distribution List: jkitchen@cecinc.com cdalbello@cecinc.com

## PROJECT INFORMATION

Project Name: Mass CEC
Project Location: 4 Wright St. - New Bedford
Project Number: 332-344
Project Manager: Jon Kitchen/Cassia ~~Dal Bello~~
Bill to: client
PO#: 332-344
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

## REQUESTED ANALYSES

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCBs | * MCP Metals | SVOCs | TCLP Pb - JA | 11/28/2023 | Total Number of Bottles |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11-10 | 14:30 | Comp | Soil | CEC-3-3 (0-4) | X | X | X | | | 2 |
| 2 | 11-10 | 12:55 | Comp | Soil | CEC-4-3 (0-4) | X | X | X | X | | 2 |
| 3 | 11-10 | 11:30 | Comp | Soil | CEC-5-3 (0-4) | X | X | X | | | 2 |
| — | | | | | | | | | | | |
| — | | | | | | | | | | | |
| 4 | 11-13 | 8:15 | Comp | Soil | CEC-2-3 (0-6) | X | X | X | X | | 2 |

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — J
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1
Number of Bottles per Sample: ~~2~~ 8

Sampled by: DAVE BARBOZA (DB)

**Chain needs to be filled out neatly and completely for on time delivery.**

Laboratory Use Only
Cooler Temperature (°C): 7.1 icepk

Comments: * Please specify "Other" preservative and containers types in this space

*MCP 14 Metals - Per Client EO 11/14/2023

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration
☐ Lab Filter

| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
|---|---|---|---|---|---|---|---|
| [signature] | 11-13-23 | 15:20 | [signature] | | | | |
| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
| | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Michael Avila
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC - New Bedford (332-344)**
**ESS Laboratory Work Order Number: 23K0441**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 1:04 pm, Nov 20, 2023**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

## SAMPLE RECEIPT

The following samples were received on November 13, 2023 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**The cooler temperature was not within the acceptance limit of <6°C, however, samples were delivered on ice and therefore meet regulatory criteria.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 23K0441-01 | CEC 1-4 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0441-02 | CEC-2-4 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0441-03 | CEC-6-4 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0441-04 | CEC-5-4 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23K0441

## PROJECT NARRATIVE

**8270D Semi-Volatile Organic Compounds**

| | |
|---|---|
| 23K0441-02 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| 23K0441-03 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| D3K0263-CCV1 | **Calibration required quadratic regression (Q).** |
| | 2,4-Dinitrophenol (89% @ 80-120%), Di-n-octylphthalate (90% @ 80-120%) |
| D3K0263-CCV1 | **Continuing Calibration %Diff/Drift is below control limit (CD-).** |
| | 4-Nitrophenol (38% @ 20%) |
| D3K0263-TUN1 | **Benzidine tailing factor >2.** |
| D3K0299-CCV1 | **Calibration required quadratic regression (Q).** |
| | 2,4-Dinitrophenol (106% @ 80-120%) |
| D3K0299-CCV1 | **Continuing Calibration %Diff/Drift is above control limit (CD+).** |
| | 3,3´-Dichlorobenzidine (21% @ 20%) |

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **23K0441-01 through 23K0441-04**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | (x) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| (x) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes ( ) No (x)* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: November 20, 2023
Printed Name: Laur[illegible] Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC 1-4 0-4
Date Sampled: 11/13/23 11:40
Percent Solids: 91

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (3.98) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| **Arsenic** | **2.64** (1.99) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| **Barium** | **39.2** (1.99) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| **Beryllium** | **0.32** (0.09) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| Cadmium | ND (0.40) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| **Chromium** | **13.8** (0.80) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| **Lead** | **85.3** (3.98) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| **Mercury** | **0.067** (0.032) | | 7471B | | 1 | AFV | 11/14/23 18:27 | 0.67 | 40 | DK31407 |
| **Nickel** | **8.95** (1.99) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| Selenium | ND (3.98) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| Silver | ND (0.40) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| Thallium | ND (3.98) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| **Vanadium** | **14.1** (0.80) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| **Zinc** | **58.4** (1.99) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC 1-4 0-4
Date Sampled: 11/13/23 11:40
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/16/23 10:35

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 11/16/23 20:38 | | DK31501 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 11/16/23 20:38 | | DK31501 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 11/16/23 20:38 | | DK31501 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 11/16/23 20:38 | | DK31501 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 11/16/23 20:38 | | DK31501 |
| Aroclor 1254 | ND (0.06) | | 8082A | | 1 | 11/16/23 20:38 | | DK31501 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 11/16/23 20:38 | | DK31501 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 11/16/23 20:38 | | DK31501 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 11/16/23 20:38 | | DK31501 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *63 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *60 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC 1-4 0-4
Date Sampled: 11/13/23 11:40
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.045** (0.028) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.10) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.552) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.10) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Acenaphthene** | **0.553** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Acetophenone | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Aniline | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Anthracene** | **0.974** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Azobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Benzo(a)anthracene** | **2.50** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Benzo(a)pyrene** | **2.60** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Benzo(b)fluoranthene** | **1.86** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Benzo(g,h,i)perylene** | **1.50** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC 1-4 0-4
Date Sampled: 11/13/23 11:40
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Benzo(k)fluoranthene** | **1.94** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Chrysene** | **2.51** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Dibenzo(a,h)Anthracene** | **0.384** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Dibenzofuran** | **0.394** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.552) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Fluoranthene** | **4.32** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Fluorene** | **0.445** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Indeno(1,2,3-cd)Pyrene** | **1.54** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Isophorone | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Naphthalene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.10) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Phenanthrene** | **4.37** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Phenol | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Pyrene** | **5.24** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *90 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *98 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *91 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC 1-4 0-4
Date Sampled: 11/13/23 11:40
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *95 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *77 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *81 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *82 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *116 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-4 0-4
Date Sampled: 11/13/23 10:20
Percent Solids: 93

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.23) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| Arsenic | ND (2.11) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| **Barium** | **55.8** (2.11) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| **Beryllium** | **0.28** (0.09) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| Cadmium | ND (0.42) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| **Chromium** | **17.0** (0.85) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| **Lead** | **43.2** (4.23) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| **Mercury** | **0.055** (0.035) | | 7471B | | 1 | AFV | 11/14/23 18:29 | 0.61 | 40 | DK31407 |
| **Nickel** | **10.0** (2.11) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| Selenium | ND (4.23) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| Silver | ND (0.85) | | 6010C | | 2 | CEV | 11/16/23 10:06 | 2.54 | 100 | DK31419 |
| Thallium | ND (4.23) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| **Vanadium** | **26.6** (0.85) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| **Zinc** | **51.2** (2.11) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-4 0-4
Date Sampled: 11/13/23 10:20
Percent Solids: 93
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/16/23 10:35

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 11/16/23 20:57 | | DK31501 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 11/16/23 20:57 | | DK31501 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 11/16/23 20:57 | | DK31501 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 11/16/23 20:57 | | DK31501 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 11/16/23 20:57 | | DK31501 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 11/16/23 20:57 | | DK31501 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 11/16/23 20:57 | | DK31501 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 11/16/23 20:57 | | DK31501 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 11/16/23 20:57 | | DK31501 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *54 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-4 0-4
Date Sampled: 11/13/23 10:20
Percent Solids: 93
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.052) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (2.09) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (1.05) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (2.09) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Acetophenone | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Aniline | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Anthracene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Azobenzene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| **Benzo(a)anthracene** | **0.697** (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| **Benzo(a)pyrene** | **0.808** (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| **Benzo(b)fluoranthene** | **0.644** (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-4 0-4
Date Sampled: 11/13/23 10:20
Percent Solids: 93
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Benzo(k)fluoranthene** | **0.623** (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| **Chrysene** | **0.648** (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (1.05) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| **Fluoranthene** | **1.16** (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Fluorene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Isophorone | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Naphthalene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (2.09) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| **Phenanthrene** | **0.707** (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Phenol | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| **Pyrene** | **1.21** (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *87 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *81 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *82 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-4 0-4
Date Sampled: 11/13/23 10:20
Percent Solids: 93
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *94 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *63 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *76 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *75 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *104 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-4 0-4
Date Sampled: 11/13/23 13:15
Percent Solids: 91

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-03
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (3.67) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| Arsenic | ND (1.83) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| **Barium** | **31.8** (1.83) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| **Beryllium** | **0.16** (0.08) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| Cadmium | ND (0.37) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| **Chromium** | **11.0** (0.73) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| **Lead** | **27.2** (3.67) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| **Mercury** | **0.075** (0.033) | | 7471B | | 1 | AFV | 11/14/23 18:31 | 0.66 | 40 | DK31407 |
| **Nickel** | **6.35** (1.83) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| Selenium | ND (3.67) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| Silver | ND (0.37) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| Thallium | ND (3.67) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| **Vanadium** | **12.0** (0.73) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| **Zinc** | **26.0** (1.83) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-4 0-4
Date Sampled: 11/13/23 13:15
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/16/23 10:35

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 11/16/23 21:17 | | DK31501 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 11/16/23 21:17 | | DK31501 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 11/16/23 21:17 | | DK31501 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 11/16/23 21:17 | | DK31501 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 11/16/23 21:17 | | DK31501 |
| Aroclor 1254 | ND (0.06) | | 8082A | | 1 | 11/16/23 21:17 | | DK31501 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 11/16/23 21:17 | | DK31501 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 11/16/23 21:17 | | DK31501 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 11/16/23 21:17 | | DK31501 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *53 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-4 0-4
Date Sampled: 11/13/23 13:15
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.053) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2,4-Dichlorophenol | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2,4-Dimethylphenol | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2,4-Dinitrophenol | ND (2.14) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2-Chloronaphthalene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2-Chlorophenol | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2-Methylnaphthalene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2-Methylphenol | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2-Nitrophenol | ND (1.07) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 3+4-Methylphenol | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 4-Chloroaniline | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 4-Nitrophenol | ND (2.14) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Acenaphthene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Acenaphthylene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Acetophenone | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Aniline | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Anthracene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Azobenzene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Benzo(a)anthracene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Benzo(a)pyrene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Benzo(b)fluoranthene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-4 0-4
Date Sampled: 11/13/23 13:15
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Butylbenzylphthalate | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Chrysene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Dibenzofuran | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Diethylphthalate | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Dimethylphthalate | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Di-n-butylphthalate | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Di-n-octylphthalate | ND (1.07) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Fluoranthene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Fluorene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Hexachlorobenzene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Hexachlorobutadiene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Hexachloroethane | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Isophorone | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Naphthalene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Nitrobenzene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| N-Nitrosodimethylamine | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Pentachlorophenol | ND (2.14) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Phenanthrene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Phenol | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Pyrene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *85 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *70 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *81 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-4 0-4
Date Sampled: 11/13/23 13:15
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *84 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *73 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *83 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *82 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *90 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-4 0-4
Date Sampled: 11/13/23 14:10
Percent Solids: 94

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (3.68) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| Arsenic | ND (1.84) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| **Barium** | **28.6** (1.84) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| **Beryllium** | **0.21** (0.08) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| Cadmium | ND (0.37) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| **Chromium** | **7.76** (0.74) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| **Lead** | **113** (3.68) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| **Mercury** | **0.069** (0.034) | | 7471B | | 1 | AFV | 11/14/23 18:33 | 0.61 | 40 | DK31407 |
| **Nickel** | **5.14** (1.84) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| Selenium | ND (3.68) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| Silver | ND (0.37) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| Thallium | ND (3.68) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| **Vanadium** | **13.3** (0.74) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| **Zinc** | **34.1** (1.84) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-4 0-4
Date Sampled: 11/13/23 14:10
Percent Solids: 94
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/16/23 10:35

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 11/17/23 11:24 | | DK31501 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 11/17/23 11:24 | | DK31501 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 11/17/23 11:24 | | DK31501 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 11/17/23 11:24 | | DK31501 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 11/17/23 11:24 | | DK31501 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 11/17/23 11:24 | | DK31501 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 11/17/23 11:24 | | DK31501 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 11/17/23 11:24 | | DK31501 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 11/17/23 11:24 | | DK31501 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *76 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-4 0-4
Date Sampled: 11/13/23 14:10
Percent Solids: 94
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/14/23 12:15

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.025) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 1,2,4-Trichlorobenzene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 1,2-Dichlorobenzene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 1,3-Dichlorobenzene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 1,4-Dichlorobenzene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2,4,5-Trichlorophenol | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2,4,6-Trichlorophenol | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2,4-Dichlorophenol | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2,4-Dimethylphenol | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2,4-Dinitrophenol | ND (1.01) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2,4-Dinitrotoluene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2,6-Dinitrotoluene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2-Chloronaphthalene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2-Chlorophenol | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2-Methylnaphthalene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2-Methylphenol | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2-Nitrophenol | ND (0.507) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 3,3´-Dichlorobenzidine | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 3+4-Methylphenol | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 4-Bromophenyl-phenylether | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 4-Chloroaniline | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 4-Nitrophenol | ND (1.01) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Acenaphthene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Acenaphthylene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Acetophenone | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Aniline | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Anthracene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Azobenzene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| **Benzo(a)anthracene** | **0.305** (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| **Benzo(a)pyrene** | **0.312** (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| **Benzo(b)fluoranthene** | **0.280** (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Benzo(g,h,i)perylene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-4 0-4
Date Sampled: 11/13/23 14:10
Percent Solids: 94
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/14/23 12:15

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| bis(2-Chloroethoxy)methane | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| bis(2-Chloroethyl)ether | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| bis(2-chloroisopropyl)Ether | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| bis(2-Ethylhexyl)phthalate | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Butylbenzylphthalate | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| **Chrysene** | **0.304** (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Dibenzo(a,h)Anthracene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Dibenzofuran | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Diethylphthalate | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Dimethylphthalate | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Di-n-butylphthalate | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Di-n-octylphthalate | ND (0.507) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| **Fluoranthene** | **0.625** (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Fluorene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Hexachlorobenzene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Hexachlorobutadiene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Hexachloroethane | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Indeno(1,2,3-cd)Pyrene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Isophorone | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Naphthalene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Nitrobenzene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| N-Nitrosodimethylamine | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Pentachlorophenol | ND (1.01) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| **Phenanthrene** | **0.434** (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Phenol | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| **Pyrene** | **0.591** (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *83 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *101 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *85 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-4 0-4
Date Sampled: 11/13/23 14:10
Percent Solids: 94
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/14/23 12:15

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *86 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *85 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *81 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *84 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *104 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DK31407 - 7471B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Mercury | ND | 0.032 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Mercury | 9.44 | 3.09 | mg/kg wet | 17.10 | | 55 | 33.1-86.55 | | | |
| **LCS Dup** | | | | | | | | | | |
| Mercury | 9.78 | 3.09 | mg/kg wet | 17.10 | | 57 | 33.1-86.55 | 4 | 30 | |
| **Batch DK31419 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Antimony | ND | 5.00 | mg/kg wet | | | | | | | |
| Arsenic | ND | 2.50 | mg/kg wet | | | | | | | |
| Barium | ND | 2.50 | mg/kg wet | | | | | | | |
| Beryllium | ND | 0.11 | mg/kg wet | | | | | | | |
| Cadmium | ND | 0.50 | mg/kg wet | | | | | | | |
| Chromium | ND | 1.00 | mg/kg wet | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| Nickel | ND | 2.50 | mg/kg wet | | | | | | | |
| Selenium | ND | 5.00 | mg/kg wet | | | | | | | |
| Silver | ND | 0.50 | mg/kg wet | | | | | | | |
| Thallium | ND | 5.00 | mg/kg wet | | | | | | | |
| Vanadium | ND | 1.00 | mg/kg wet | | | | | | | |
| Zinc | ND | 2.50 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Antimony | 38.5 | 15.4 | mg/kg wet | 54.20 | | 71 | 40-160 | | | |
| Arsenic | 255 | 7.69 | mg/kg wet | 258.0 | | 99 | 80-120 | | | |
| Barium | 837 | 7.69 | mg/kg wet | 809.0 | | 103 | 80-120 | | | |
| Beryllium | 48.7 | 0.34 | mg/kg wet | 48.50 | | 100 | 80-120 | | | |
| Cadmium | 309 | 1.54 | mg/kg wet | 321.0 | | 96 | 80-120 | | | |
| Chromium | 123 | 3.08 | mg/kg wet | 133.0 | | 92 | 80-120 | | | |
| Lead | 103 | 15.4 | mg/kg wet | 102.0 | | 101 | 80-120 | | | |
| Nickel | 143 | 7.69 | mg/kg wet | 137.0 | | 105 | 80-120 | | | |
| Selenium | 50.6 | 15.4 | mg/kg wet | 49.40 | | 102 | 80-120 | | | |
| Silver | 23.4 | 1.54 | mg/kg wet | 22.70 | | 103 | 80-120 | | | |
| Thallium | 82.2 | 15.4 | mg/kg wet | 81.40 | | 101 | 80-120 | | | |
| Vanadium | 96.8 | 3.08 | mg/kg wet | 108.0 | | 90 | 80-120 | | | |
| Zinc | 518 | 7.69 | mg/kg wet | 540.0 | | 96 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Antimony | 41.0 | 15.9 | mg/kg wet | 54.20 | | 76 | 40-160 | 6 | 30 | |
| Arsenic | 289 | 7.94 | mg/kg wet | 258.0 | | 112 | 80-120 | 13 | 30 | |
| Barium | 879 | 7.94 | mg/kg wet | 809.0 | | 109 | 80-120 | 5 | 30 | |
| Beryllium | 55.2 | 0.35 | mg/kg wet | 48.50 | | 114 | 80-120 | 12 | 20 | |
| Cadmium | 345 | 1.59 | mg/kg wet | 321.0 | | 107 | 80-120 | 11 | 30 | |
| Chromium | 139 | 3.17 | mg/kg wet | 133.0 | | 104 | 80-120 | 12 | 30 | |
| Lead | 115 | 15.9 | mg/kg wet | 102.0 | | 113 | 80-120 | 11 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DK31419 - 3050B** | | | | | | | | | | |
| Nickel | 159 | 7.94 | mg/kg wet | 137.0 | | 116 | 80-120 | 10 | 30 | |
| Selenium | 56.0 | 15.9 | mg/kg wet | 49.40 | | 113 | 80-120 | 10 | 30 | |
| Silver | 26.0 | 1.59 | mg/kg wet | 22.70 | | 114 | 80-120 | 10 | 30 | |
| Thallium | 91.4 | 15.9 | mg/kg wet | 81.40 | | 112 | 80-120 | 11 | 30 | |
| Vanadium | 111 | 3.17 | mg/kg wet | 108.0 | | 103 | 80-120 | 14 | 30 | |
| Zinc | 580 | 7.94 | mg/kg wet | 540.0 | | 107 | 80-120 | 11 | 30 | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DK31501 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0209* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0215* | | mg/kg wet | *0.02500* | | *86* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 80 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 79 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 82 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0199* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0204* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0207* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 81 | 40-140 | 0.8 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DK31501 - 3540C** | | | | | | | | | | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 79 | 40-140 | 0.1 | 30 | |
| Aroclor 1260 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 84 | 40-140 | 1 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 84 | 40-140 | 1 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0199* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0204* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.33* | | mg/kg wet | *2.500* | | *93* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.54* | | mg/kg wet | *3.750* | | *95* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.30* | | mg/kg wet | *3.750* | | *88* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.30* | | mg/kg wet | *2.500* | | *92* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.71* | | mg/kg wet | *3.750* | | *72* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.22* | | mg/kg wet | *2.500* | | *89* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.08* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.99* | | mg/kg wet | *2.500* | | *120* | *30-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.03 | 0.025 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| 1,2-Dichlorobenzene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| 1,3-Dichlorobenzene | 2.06 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 30-130 | | | |
| 2,4-Dichlorophenol | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 30-130 | | | |
| 2,4-Dimethylphenol | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 30-130 | | | |
| 2,4-Dinitrophenol | 1.47 | 1.00 | mg/kg wet | 2.500 | | 59 | 30-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8270D Semi-Volatile Organic Compounds | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| 2,4-Dinitrotoluene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| 2-Chloronaphthalene | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| 2-Chlorophenol | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 30-130 | | | |
| 2-Methylnaphthalene | 1.84 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| 2-Methylphenol | 1.80 | 0.250 | mg/kg wet | 2.500 | | 72 | 30-130 | | | |
| 2-Nitrophenol | 1.89 | 0.500 | mg/kg wet | 2.500 | | 76 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| 3+4-Methylphenol | 3.64 | 0.250 | mg/kg wet | 5.000 | | 73 | 30-130 | | | |
| 4-Bromophenyl-phenylether | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| 4-Chloroaniline | 1.49 | 0.250 | mg/kg wet | 2.500 | | 60 | 40-140 | | | |
| 4-Nitrophenol | 1.42 | 1.00 | mg/kg wet | 2.500 | | 57 | 30-130 | | | |
| Acenaphthene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Acenaphthylene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Acetophenone | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Aniline | 1.29 | 0.250 | mg/kg wet | 2.500 | | 52 | 40-140 | | | |
| Anthracene | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Azobenzene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Benzo(a)anthracene | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Benzo(a)pyrene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.64 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 1.63 | 0.250 | mg/kg wet | 2.500 | | 65 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 1.86 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.67 | 0.250 | mg/kg wet | 2.500 | | 67 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Butylbenzylphthalate | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Chrysene | 2.34 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| Dibenzofuran | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Diethylphthalate | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Dimethylphthalate | 2.29 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Di-n-butylphthalate | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Di-n-octylphthalate | 2.03 | 0.500 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Fluoranthene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Fluorene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Hexachlorobenzene | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| Hexachlorobutadiene | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Hexachloroethane | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Isophorone | 1.56 | 0.250 | mg/kg wet | 2.500 | | 62 | 40-140 | | | |
| Naphthalene | 1.77 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Nitrobenzene | 1.66 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | | | |
| N-Nitrosodimethylamine | 1.64 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| Pentachlorophenol | 1.73 | 1.00 | mg/kg wet | 2.500 | | 69 | 30-130 | | | |
| Phenanthrene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Phenol | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 30-130 | | | |
| Pyrene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.17* | | mg/kg wet | *2.500* | | *87* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.97* | | mg/kg wet | *3.750* | | *106* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.17* | | mg/kg wet | *3.750* | | *85* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.30* | | mg/kg wet | *2.500* | | *92* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.85* | | mg/kg wet | *3.750* | | *76* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.84* | | mg/kg wet | *2.500* | | *74* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *2.89* | | mg/kg wet | *3.750* | | *77* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.64* | | mg/kg wet | *2.500* | | *106* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.16 | 0.025 | mg/kg wet | 2.500 | | 86 | 40-140 | 6 | 30 | |
| 1,2,4-Trichlorobenzene | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 5 | 30 | |
| 1,2-Dichlorobenzene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 2 | 30 | |
| 1,3-Dichlorobenzene | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 0.4 | 30 | |
| 1,4-Dichlorobenzene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 0.4 | 30 | |
| 2,4,5-Trichlorophenol | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 30-130 | 7 | 30 | |
| 2,4,6-Trichlorophenol | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 30-130 | 6 | 30 | |
| 2,4-Dichlorophenol | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 30-130 | 5 | 30 | |
| 2,4-Dimethylphenol | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 30-130 | 5 | 30 | |
| 2,4-Dinitrophenol | 1.70 | 1.00 | mg/kg wet | 2.500 | | 68 | 30-130 | 15 | 30 | |
| 2,4-Dinitrotoluene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 8 | 30 | |
| 2,6-Dinitrotoluene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 7 | 30 | |
| 2-Chloronaphthalene | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 2 | 30 | |
| 2-Chlorophenol | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 30-130 | 0.2 | 30 | |
| 2-Methylnaphthalene | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | 3 | 30 | |
| 2-Methylphenol | 1.79 | 0.250 | mg/kg wet | 2.500 | | 71 | 30-130 | 0.9 | 30 | |
| 2-Nitrophenol | 1.99 | 0.500 | mg/kg wet | 2.500 | | 79 | 30-130 | 5 | 30 | |
| 3,3´-Dichlorobenzidine | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 8 | 30 | |
| 3+4-Methylphenol | 3.62 | 0.250 | mg/kg wet | 5.000 | | 72 | 30-130 | 0.5 | 30 | |
| 4-Bromophenyl-phenylether | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | 9 | 30 | |
| 4-Chloroaniline | 1.50 | 0.250 | mg/kg wet | 2.500 | | 60 | 40-140 | 1 | 30 | |
| 4-Nitrophenol | 1.40 | 1.00 | mg/kg wet | 2.500 | | 56 | 30-130 | 2 | 30 | |
| Acenaphthene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 5 | 30 | |
| Acenaphthylene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 5 | 30 | |
| Acetophenone | 1.71 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | 4 | 30 | |
| Aniline | 1.36 | 0.250 | mg/kg wet | 2.500 | | 55 | 40-140 | 5 | 30 | |
| Anthracene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 2 | 30 | |
| Azobenzene | 1.86 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | 7 | 30 | |
| Benzo(a)anthracene | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 6 | 30 | |
| Benzo(a)pyrene | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 7 | 30 | |
| Benzo(b)fluoranthene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 6 | 30 | |
| Benzo(g,h,i)perylene | 2.89 | 0.250 | mg/kg wet | 2.500 | | 116 | 40-140 | 9 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| Benzo(k)fluoranthene | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 7 | 30 | |
| bis(2-Chloroethoxy)methane | 1.63 | 0.250 | mg/kg wet | 2.500 | | 65 | 40-140 | 0.03 | 30 | |
| bis(2-Chloroethyl)ether | 1.67 | 0.250 | mg/kg wet | 2.500 | | 67 | 40-140 | 11 | 30 | |
| bis(2-chloroisopropyl)Ether | 1.64 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | 2 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 3 | 30 | |
| Butylbenzylphthalate | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 4 | 30 | |
| Chrysene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 6 | 30 | |
| Dibenzo(a,h)Anthracene | 2.82 | 0.250 | mg/kg wet | 2.500 | | 113 | 40-140 | 7 | 30 | |
| Dibenzofuran | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 4 | 30 | |
| Diethylphthalate | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 1 | 30 | |
| Dimethylphthalate | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 4 | 30 | |
| Di-n-butylphthalate | 2.26 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 0.9 | 30 | |
| Di-n-octylphthalate | 2.12 | 0.500 | mg/kg wet | 2.500 | | 85 | 40-140 | 4 | 30 | |
| Fluoranthene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 2 | 30 | |
| Fluorene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 3 | 30 | |
| Hexachlorobenzene | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 3 | 30 | |
| Hexachlorobutadiene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 4 | 30 | |
| Hexachloroethane | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 3 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 6 | 30 | |
| Isophorone | 1.54 | 0.250 | mg/kg wet | 2.500 | | 62 | 40-140 | 1 | 30 | |
| Naphthalene | 1.81 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | 2 | 30 | |
| Nitrobenzene | 1.65 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | 0.3 | 30 | |
| N-Nitrosodimethylamine | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | 16 | 30 | |
| Pentachlorophenol | 1.81 | 1.00 | mg/kg wet | 2.500 | | 72 | 30-130 | 4 | 30 | |
| Phenanthrene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 3 | 30 | |
| Phenol | 1.61 | 0.250 | mg/kg wet | 2.500 | | 65 | 30-130 | 13 | 30 | |
| Pyrene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 4 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.11* | | mg/kg wet | *2.500* | | *84* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.24* | | mg/kg wet | *3.750* | | *113* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.09* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.36* | | mg/kg wet | *2.500* | | *94* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.60* | | mg/kg wet | *3.750* | | *69* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.78* | | mg/kg wet | *2.500* | | *71* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *2.76* | | mg/kg wet | *3.750* | | *74* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.75* | | mg/kg wet | *2.500* | | *110* | *30-130* | | | |
| **Batch DK31403 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31403 - 3546** | | | | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31403 - 3546** | | | | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.17* | | mg/kg wet | *2.500* | | *87* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.72* | | mg/kg wet | *3.750* | | *99* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.26* | | mg/kg wet | *3.750* | | *87* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.23* | | mg/kg wet | *2.500* | | *89* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.40* | | mg/kg wet | *3.750* | | *91* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.18* | | mg/kg wet | *2.500* | | *87* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.28* | | mg/kg wet | *3.750* | | *88* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.69* | | mg/kg wet | *2.500* | | *108* | *30-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.07 | 0.025 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 2.01 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| 1,2-Dichlorobenzene | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| 1,3-Dichlorobenzene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 30-130 | | | |
| 2,4-Dichlorophenol | 2.03 | 0.250 | mg/kg wet | 2.500 | | 81 | 30-130 | | | |
| 2,4-Dimethylphenol | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 30-130 | | | |
| 2,4-Dinitrophenol | 1.95 | 1.00 | mg/kg wet | 2.500 | | 78 | 30-130 | | | |
| 2,4-Dinitrotoluene | 2.34 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.56 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | | | |
| 2-Chloronaphthalene | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| 2-Chlorophenol | 2.14 | 0.250 | mg/kg wet | 2.500 | | 86 | 30-130 | | | |
| 2-Methylnaphthalene | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| 2-Methylphenol | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 30-130 | | | |
| 2-Nitrophenol | 1.94 | 0.500 | mg/kg wet | 2.500 | | 78 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.36 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| 3+4-Methylphenol | 4.50 | 0.250 | mg/kg wet | 5.000 | | 90 | 30-130 | | | |
| 4-Bromophenyl-phenylether | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| 4-Chloroaniline | 1.84 | 0.250 | mg/kg wet | 2.500 | | 73 | 40-140 | | | |
| 4-Nitrophenol | 2.18 | 1.00 | mg/kg wet | 2.500 | | 87 | 30-130 | | | |
| Acenaphthene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Acenaphthylene | 2.19 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Acetophenone | 1.97 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| Aniline | 1.81 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | | | |
| Anthracene | 2.36 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Azobenzene | 2.02 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Benzo(a)anthracene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Benzo(a)pyrene | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31403 - 3546** | | | | | | | | | | |
| Benzo(b)fluoranthene | 2.58 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 1.79 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.86 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| Butylbenzylphthalate | 2.61 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Chrysene | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Dibenzofuran | 2.24 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Diethylphthalate | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Dimethylphthalate | 2.39 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Di-n-butylphthalate | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Di-n-octylphthalate | 2.61 | 0.500 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Fluoranthene | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Fluorene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Hexachlorobenzene | 2.34 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| Hexachlorobutadiene | 1.98 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| Hexachloroethane | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.50 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Isophorone | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Naphthalene | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 40-140 | | | |
| Nitrobenzene | 1.88 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| N-Nitrosodimethylamine | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Pentachlorophenol | 2.15 | 1.00 | mg/kg wet | 2.500 | | 86 | 30-130 | | | |
| Phenanthrene | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Phenol | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 30-130 | | | |
| Pyrene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.23* | | mg/kg wet | *2.500* | | *89* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.78* | | mg/kg wet | *3.750* | | *101* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.40* | | mg/kg wet | *3.750* | | *91* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.36* | | mg/kg wet | *2.500* | | *94* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.48* | | mg/kg wet | *3.750* | | *93* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.03* | | mg/kg wet | *2.500* | | *81* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.42* | | mg/kg wet | *3.750* | | *91* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.66* | | mg/kg wet | *2.500* | | *106* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.13 | 0.025 | mg/kg wet | 2.500 | | 85 | 40-140 | 3 | 30 | |
| 1,2,4-Trichlorobenzene | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | 3 | 30 | |
| 1,2-Dichlorobenzene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 0.4 | 30 | |
| 1,3-Dichlorobenzene | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 2 | 30 | |
| 1,4-Dichlorobenzene | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 0.5 | 30 | |
| 2,4,5-Trichlorophenol | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 30-130 | 2 | 30 | |
| 2,4,6-Trichlorophenol | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 30-130 | 2 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31403 - 3546** | | | | | | | | | | |
| 2,4-Dichlorophenol | 2.01 | 0.250 | mg/kg wet | 2.500 | | 80 | 30-130 | 1 | 30 | |
| 2,4-Dimethylphenol | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 30-130 | 0.5 | 30 | |
| 2,4-Dinitrophenol | 2.03 | 1.00 | mg/kg wet | 2.500 | | 81 | 30-130 | 4 | 30 | |
| 2,4-Dinitrotoluene | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 2 | 30 | |
| 2,6-Dinitrotoluene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 2 | 30 | |
| 2-Chloronaphthalene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 0.7 | 30 | |
| 2-Chlorophenol | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 30-130 | 1 | 30 | |
| 2-Methylnaphthalene | 1.98 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | 2 | 30 | |
| 2-Methylphenol | 2.19 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | 1 | 30 | |
| 2-Nitrophenol | 1.95 | 0.500 | mg/kg wet | 2.500 | | 78 | 30-130 | 0.4 | 30 | |
| 3,3´-Dichlorobenzidine | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 0.4 | 30 | |
| 3+4-Methylphenol | 4.61 | 0.250 | mg/kg wet | 5.000 | | 92 | 30-130 | 2 | 30 | |
| 4-Bromophenyl-phenylether | 2.39 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 3 | 30 | |
| 4-Chloroaniline | 1.88 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | 3 | 30 | |
| 4-Nitrophenol | 2.20 | 1.00 | mg/kg wet | 2.500 | | 88 | 30-130 | 1 | 30 | |
| Acenaphthene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | 1 | 30 | |
| Acenaphthylene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | 2 | 30 | |
| Acetophenone | 2.01 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 2 | 30 | |
| Aniline | 1.86 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | 2 | 30 | |
| Anthracene | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 3 | 30 | |
| Azobenzene | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 3 | 30 | |
| Benzo(a)anthracene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 0.06 | 30 | |
| Benzo(a)pyrene | 2.66 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 1 | 30 | |
| Benzo(b)fluoranthene | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 3 | 30 | |
| Benzo(g,h,i)perylene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 0.3 | 30 | |
| Benzo(k)fluoranthene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 0.8 | 30 | |
| bis(2-Chloroethoxy)methane | 1.81 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | 1 | 30 | |
| bis(2-Chloroethyl)ether | 1.93 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | 1 | 30 | |
| bis(2-chloroisopropyl)Ether | 1.84 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | 0.8 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.69 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 2 | 30 | |
| Butylbenzylphthalate | 2.64 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 1 | 30 | |
| Chrysene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 1 | 30 | |
| Dibenzo(a,h)Anthracene | 2.58 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 4 | 30 | |
| Dibenzofuran | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 2 | 30 | |
| Diethylphthalate | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 1 | 30 | |
| Dimethylphthalate | 2.41 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 1 | 30 | |
| Di-n-butylphthalate | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 2 | 30 | |
| Di-n-octylphthalate | 2.75 | 0.500 | mg/kg wet | 2.500 | | 110 | 40-140 | 5 | 30 | |
| Fluoranthene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 1 | 30 | |
| Fluorene | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 2 | 30 | |
| Hexachlorobenzene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 2 | 30 | |
| Hexachlorobutadiene | 2.06 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 4 | 30 | |
| Hexachloroethane | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 0.9 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.58 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 3 | 30 | |
| Isophorone | 1.81 | 0.250 | mg/kg wet | 2.500 | | 73 | 40-140 | 2 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

## Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8270D Semi-Volatile Organic Compounds | | | | | | | | | | |
| **Batch DK31403 - 3546** | | | | | | | | | | |
| Naphthalene | 1.88 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | 3 | 30 | |
| Nitrobenzene | 1.91 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | 2 | 30 | |
| N-Nitrosodimethylamine | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 1 | 30 | |
| Pentachlorophenol | 2.19 | 1.00 | mg/kg wet | 2.500 | | 87 | 30-130 | 2 | 30 | |
| Phenanthrene | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 2 | 30 | |
| Phenol | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | 3 | 30 | |
| Pyrene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 1 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.18* | | mg/kg wet | *2.500* | | *87* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.74* | | mg/kg wet | *3.750* | | *100* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.34* | | mg/kg wet | *3.750* | | *89* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.32* | | mg/kg wet | *2.500* | | *93* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.39* | | mg/kg wet | *3.750* | | *90* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.98* | | mg/kg wet | *2.500* | | *79* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.38* | | mg/kg wet | *3.750* | | *90* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.60* | | mg/kg wet | *2.500* | | *104* | *30-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23K0441

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| Q | Calibration required quadratic regression (Q). |
| EL | Elevated Method Reporting Limits due to sample matrix (EL). |
| D | Diluted. |
| CD+ | Continuing Calibration %Diff/Drift is above control limit (CD+). |
| CD- | Continuing Calibration %Diff/Drift is below control limit (CD-). |
| BT | Benzidine tailing factor >2. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: Client

ESS Project ID: 23K0441
Date Received: 11/13/2023
Project Due Date: 11/20/2023
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 7.1 Iced with: Ice Pack
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 493046 | Yes | N/A | Yes | 8 oz jar | NP | |
| 1 | 493047 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 493048 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 493049 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 493050 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 493051 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 493052 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 493053 | Yes | N/A | Yes | 8 oz jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials
Are barcode labels on correct containers? Yes / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 23K0441

Date Received: 11/13/2023

By: [signature] Date & Time: 11/13/23. 1556

Reviewed By: [signature] Date & Time: 11/13/23 1601

# CHAIN OF CUSTODY

ESS Lab # 23K0441 | Page 1 of 1

ESS LABORATORY
185 Frances Avenue
Cranston, RI 02910
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

Turn Time (Days) ☐>5 ☑5 ☐4 ☐3 ☐2 ☐1 ☐ Same Day

Regulatory State: MA Criteria: MCP S-1

Is this project for any of the following?:

☑ CT RCP ☐ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

**ELECTRONIC DELIVERABLES (Final Reports are PDF)**

☑ Limit Checker ☐ State Forms ☐ EQuIS
☑ Excel ☐ State Upload ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

## CLIENT INFORMATION

Client: CEC
Address: 32 Bellows Rd Raynham, MA
Phone: 774-501-2176
Email Distribution List: JKitchen@cecinc.com cdalbello@cecinc.com

## PROJECT INFORMATION

Project Name: MASS CEC
Project Location: 4 Wright St - New Bedford
Project Number: 332-344
Project Manager: Jon Kitchen / Cassia Dal Bello
Bill to: Client
PO#:
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

## REQUESTED ANALYSES

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCBs | MCP Metals | SVOCs | Total Number of Bottles |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 11-13 | 11:40 | Comp | Soil | CEC-1-4 (0-4) | X | X | X | 2 |
| 2 | 11-13 | 10:20 | Comp | Soil | CEC-2-4 (0-4) | X | X | X | 2 |
| 3 | 11-13 | 13:15 | Comp | Soil | CEC-6-4 (0-4) | X | X | X | 2 |
| 4 | 11-13 | 14:10 | Comp | Soil | CEC-5-4 (0-4) | X | X | X | 2 |
| | | | | | | | | | |
| | | | | | | | | | |
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| | | | | | | | | | |

| | | | |
|---|---|---|---|
| Container Type: | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | J | 8 |
| Container Volume: | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | 40 | |
| Preservation Code: | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | 1 | |
| | Number of Bottles per Sample: | 2 | |

Sampled by : DAVE BARBOZA (DB)

**Chain needs to be filled out neatly and completely for on time delivery.**

**Laboratory Use Only**

Cooler Temperature (°C): 7.1 ICEPR

**Comments:** * Please specify "Other" preservative and containers types in this space

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

**Dissolved Filtration**

☐ Lab Filter

| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
|---|---|---|---|---|---|---|---|
| [signature] | 11-13-23 | 15:20 | [signature] | | | | |
| **Relinquished by (Signature)** | **Date** | **Time** | **Received by (Signature)** | **Relinquished by (Signature)** | **Date** | **Time** | **Received by (Signature)** |
| | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Michael Avila
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC - New Bedford (332-344)**
**ESS Laboratory Work Order Number: 23K0441**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 2:52 pm, Dec 05, 2023**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

## SAMPLE RECEIPT

The following samples were received on November 13, 2023 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**The cooler temperature was not within the acceptance limit of <6°C, however, samples were delivered on ice and therefore meet regulatory criteria.**

**Revision 1 December 5, 2023: This report has been revised to include TCLP lead on sample-04.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 23K0441-01 | CEC 1-4 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0441-02 | CEC-2-4 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0441-03 | CEC-6-4 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23K0441-04 | CEC-5-4 0-4 | Soil | 1311, 1311/6010C, 6010C, 7471B, 8082A, 8270D |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23K0441

## PROJECT NARRATIVE

**8270D Semi-Volatile Organic Compounds**

| | |
|---|---|
| 23K0441-02 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| 23K0441-03 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| D3K0263-CCV1 | **Calibration required quadratic regression (Q).** |
| | 2,4-Dinitrophenol (89% @ 80-120%), Di-n-octylphthalate (90% @ 80-120%) |
| D3K0263-CCV1 | **Continuing Calibration %Diff/Drift is below control limit (CD-).** |
| | 4-Nitrophenol (38% @ 20%) |
| D3K0263-TUN1 | **Benzidine tailing factor >2.** |
| D3K0299-CCV1 | **Calibration required quadratic regression (Q).** |
| | 2,4-Dinitrophenol (106% @ 80-120%) |
| D3K0299-CCV1 | **Continuing Calibration %Diff/Drift is above control limit (CD+).** |
| | 3,3´-Dichlorobenzidine (21% @ 20%) |

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **23K0441-01 through 23K0441-04**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | (x) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| (x) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes ( ) No (x)* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: November 20, 2023
Printed Name: Laur[illegible] Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC 1-4 0-4
Date Sampled: 11/13/23 11:40
Percent Solids: 91

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (3.98) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| **Arsenic** | **2.64** (1.99) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| **Barium** | **39.2** (1.99) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| **Beryllium** | **0.32** (0.09) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| Cadmium | ND (0.40) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| **Chromium** | **13.8** (0.80) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| **Lead** | **85.3** (3.98) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| **Mercury** | **0.067** (0.032) | | 7471B | | 1 | AFV | 11/14/23 18:27 | 0.67 | 40 | DK31407 |
| **Nickel** | **8.95** (1.99) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| Selenium | ND (3.98) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| Silver | ND (0.40) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| Thallium | ND (3.98) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| **Vanadium** | **14.1** (0.80) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |
| **Zinc** | **58.4** (1.99) | | 6010C | | 1 | CEV | 11/15/23 12:42 | 2.76 | 100 | DK31419 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC 1-4 0-4
Date Sampled: 11/13/23 11:40
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/16/23 10:35

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 11/16/23 20:38 | | DK31501 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 11/16/23 20:38 | | DK31501 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 11/16/23 20:38 | | DK31501 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 11/16/23 20:38 | | DK31501 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 11/16/23 20:38 | | DK31501 |
| Aroclor 1254 | ND (0.06) | | 8082A | | 1 | 11/16/23 20:38 | | DK31501 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 11/16/23 20:38 | | DK31501 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 11/16/23 20:38 | | DK31501 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 11/16/23 20:38 | | DK31501 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *63 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *60 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC 1-4 0-4
Date Sampled: 11/13/23 11:40
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.045** (0.028) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (1.10) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (0.552) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (1.10) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Acenaphthene** | **0.553** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Acetophenone | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Aniline | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Anthracene** | **0.974** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Azobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Benzo(a)anthracene** | **2.50** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Benzo(a)pyrene** | **2.60** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Benzo(b)fluoranthene** | **1.86** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Benzo(g,h,i)perylene** | **1.50** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC 1-4 0-4
Date Sampled: 11/13/23 11:40
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Benzo(k)fluoranthene** | **1.94** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Chrysene** | **2.51** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Dibenzo(a,h)Anthracene** | **0.384** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Dibenzofuran** | **0.394** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (0.552) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Fluoranthene** | **4.32** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Fluorene** | **0.445** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Indeno(1,2,3-cd)Pyrene** | **1.54** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Isophorone | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Naphthalene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (1.10) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Phenanthrene** | **4.37** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| Phenol | ND (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |
| **Pyrene** | **5.24** (0.276) | | 8270D | | 1 | 11/14/23 2:02 | D3K0263 | DK31306 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *90 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *98 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *91 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC 1-4 0-4
Date Sampled: 11/13/23 11:40
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *95 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *77 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *81 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *82 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *116 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-4 0-4
Date Sampled: 11/13/23 10:20
Percent Solids: 93

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.23) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| Arsenic | ND (2.11) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| **Barium** | **55.8** (2.11) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| **Beryllium** | **0.28** (0.09) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| Cadmium | ND (0.42) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| **Chromium** | **17.0** (0.85) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| **Lead** | **43.2** (4.23) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| **Mercury** | **0.055** (0.035) | | 7471B | | 1 | AFV | 11/14/23 18:29 | 0.61 | 40 | DK31407 |
| **Nickel** | **10.0** (2.11) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| Selenium | ND (4.23) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| Silver | ND (0.85) | | 6010C | | 2 | CEV | 11/16/23 10:06 | 2.54 | 100 | DK31419 |
| Thallium | ND (4.23) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| **Vanadium** | **26.6** (0.85) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |
| **Zinc** | **51.2** (2.11) | | 6010C | | 1 | CEV | 11/15/23 12:44 | 2.54 | 100 | DK31419 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-4 0-4
Date Sampled: 11/13/23 10:20
Percent Solids: 93
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/16/23 10:35

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 11/16/23 20:57 | | DK31501 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 11/16/23 20:57 | | DK31501 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 11/16/23 20:57 | | DK31501 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 11/16/23 20:57 | | DK31501 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 11/16/23 20:57 | | DK31501 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 11/16/23 20:57 | | DK31501 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 11/16/23 20:57 | | DK31501 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 11/16/23 20:57 | | DK31501 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 11/16/23 20:57 | | DK31501 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *54 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-4 0-4
Date Sampled: 11/13/23 10:20
Percent Solids: 93
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.052) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2,4-Dichlorophenol | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2,4-Dimethylphenol | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2,4-Dinitrophenol | ND (2.09) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2-Chloronaphthalene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2-Chlorophenol | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2-Methylnaphthalene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2-Methylphenol | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 2-Nitrophenol | ND (1.05) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 3+4-Methylphenol | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 4-Chloroaniline | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| 4-Nitrophenol | ND (2.09) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Acenaphthene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Acenaphthylene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Acetophenone | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Aniline | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Anthracene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Azobenzene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| **Benzo(a)anthracene** | **0.697** (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| **Benzo(a)pyrene** | **0.808** (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| **Benzo(b)fluoranthene** | **0.644** (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-4 0-4
Date Sampled: 11/13/23 10:20
Percent Solids: 93
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Benzo(k)fluoranthene** | **0.623** (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Butylbenzylphthalate | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| **Chrysene** | **0.648** (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Dibenzofuran | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Diethylphthalate | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Dimethylphthalate | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Di-n-butylphthalate | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Di-n-octylphthalate | ND (1.05) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| **Fluoranthene** | **1.16** (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Fluorene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Hexachlorobenzene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Hexachlorobutadiene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Hexachloroethane | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Isophorone | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Naphthalene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Nitrobenzene | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| N-Nitrosodimethylamine | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Pentachlorophenol | ND (2.09) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| **Phenanthrene** | **0.707** (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| Phenol | ND (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |
| **Pyrene** | **1.21** (0.523) | | 8270D | | 2 | 11/14/23 2:33 | D3K0263 | DK31306 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *87 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *81 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *82 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-4 0-4
Date Sampled: 11/13/23 10:20
Percent Solids: 93
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *94 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *63 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *76 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *75 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *104 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-4 0-4
Date Sampled: 11/13/23 13:15
Percent Solids: 91

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-03
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (3.67) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| Arsenic | ND (1.83) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| **Barium** | **31.8** (1.83) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| **Beryllium** | **0.16** (0.08) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| Cadmium | ND (0.37) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| **Chromium** | **11.0** (0.73) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| **Lead** | **27.2** (3.67) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| **Mercury** | **0.075** (0.033) | | 7471B | | 1 | AFV | 11/14/23 18:31 | 0.66 | 40 | DK31407 |
| **Nickel** | **6.35** (1.83) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| Selenium | ND (3.67) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| Silver | ND (0.37) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| Thallium | ND (3.67) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| **Vanadium** | **12.0** (0.73) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |
| **Zinc** | **26.0** (1.83) | | 6010C | | 1 | CEV | 11/15/23 12:46 | 2.99 | 100 | DK31419 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-4 0-4
Date Sampled: 11/13/23 13:15
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/16/23 10:35

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 11/16/23 21:17 | | DK31501 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 11/16/23 21:17 | | DK31501 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 11/16/23 21:17 | | DK31501 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 11/16/23 21:17 | | DK31501 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 11/16/23 21:17 | | DK31501 |
| Aroclor 1254 | ND (0.06) | | 8082A | | 1 | 11/16/23 21:17 | | DK31501 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 11/16/23 21:17 | | DK31501 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 11/16/23 21:17 | | DK31501 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 11/16/23 21:17 | | DK31501 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *53 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-4 0-4
Date Sampled: 11/13/23 13:15
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.053) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 1,2,4-Trichlorobenzene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 1,2-Dichlorobenzene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 1,3-Dichlorobenzene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 1,4-Dichlorobenzene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2,4,5-Trichlorophenol | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2,4,6-Trichlorophenol | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2,4-Dichlorophenol | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2,4-Dimethylphenol | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2,4-Dinitrophenol | ND (2.14) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2,4-Dinitrotoluene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2,6-Dinitrotoluene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2-Chloronaphthalene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2-Chlorophenol | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2-Methylnaphthalene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2-Methylphenol | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 2-Nitrophenol | ND (1.07) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 3,3´-Dichlorobenzidine | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 3+4-Methylphenol | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 4-Bromophenyl-phenylether | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 4-Chloroaniline | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| 4-Nitrophenol | ND (2.14) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Acenaphthene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Acenaphthylene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Acetophenone | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Aniline | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Anthracene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Azobenzene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Benzo(a)anthracene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Benzo(a)pyrene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Benzo(b)fluoranthene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Benzo(g,h,i)perylene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-4 0-4
Date Sampled: 11/13/23 13:15
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| bis(2-Chloroethoxy)methane | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| bis(2-Chloroethyl)ether | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| bis(2-chloroisopropyl)Ether | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| bis(2-Ethylhexyl)phthalate | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Butylbenzylphthalate | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Chrysene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Dibenzo(a,h)Anthracene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Dibenzofuran | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Diethylphthalate | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Dimethylphthalate | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Di-n-butylphthalate | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Di-n-octylphthalate | ND (1.07) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Fluoranthene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Fluorene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Hexachlorobenzene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Hexachlorobutadiene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Hexachloroethane | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Indeno(1,2,3-cd)Pyrene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Isophorone | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Naphthalene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Nitrobenzene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| N-Nitrosodimethylamine | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Pentachlorophenol | ND (2.14) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Phenanthrene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Phenol | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |
| Pyrene | ND (0.535) | | 8270D | | 2 | 11/14/23 19:06 | D3K0299 | DK31306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *85 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *70 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *81 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-4 0-4
Date Sampled: 11/13/23 13:15
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/13/23 17:42

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *84 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *73 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *83 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *82 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *90 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-4 0-4
Date Sampled: 11/13/23 14:10
Percent Solids: 94

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (3.68) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| Arsenic | ND (1.84) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| **Barium** | **28.6** (1.84) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| **Beryllium** | **0.21** (0.08) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| Cadmium | ND (0.37) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| **Chromium** | **7.76** (0.74) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| **Lead** | **113** (3.68) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| **Mercury** | **0.069** (0.034) | | 7471B | | 1 | AFV | 11/14/23 18:33 | 0.61 | 40 | DK31407 |
| **Nickel** | **5.14** (1.84) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| Selenium | ND (3.68) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| Silver | ND (0.37) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| Thallium | ND (3.68) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| **Vanadium** | **13.3** (0.74) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |
| **Zinc** | **34.1** (1.84) | | 6010C | | 1 | CEV | 11/15/23 12:48 | 2.88 | 100 | DK31419 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-4 0-4
Date Sampled: 11/13/23 14:10
Percent Solids: 94

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-04
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.697** (0.050) | | 1311/6010C | | 1 | CEV/KJB | 11/29/23 21:09 | 50 | 50 | DK32917 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-4 0-4
Date Sampled: 11/13/23 14:10
Percent Solids: 94
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/16/23 10:35

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 11/17/23 11:24 | | DK31501 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 11/17/23 11:24 | | DK31501 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 11/17/23 11:24 | | DK31501 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 11/17/23 11:24 | | DK31501 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 11/17/23 11:24 | | DK31501 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 11/17/23 11:24 | | DK31501 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 11/17/23 11:24 | | DK31501 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 11/17/23 11:24 | | DK31501 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 11/17/23 11:24 | | DK31501 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *76 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-4 0-4
Date Sampled: 11/13/23 14:10
Percent Solids: 94
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/14/23 12:15

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.025) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 1,2,4-Trichlorobenzene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 1,2-Dichlorobenzene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 1,3-Dichlorobenzene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 1,4-Dichlorobenzene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2,4,5-Trichlorophenol | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2,4,6-Trichlorophenol | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2,4-Dichlorophenol | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2,4-Dimethylphenol | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2,4-Dinitrophenol | ND (1.01) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2,4-Dinitrotoluene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2,6-Dinitrotoluene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2-Chloronaphthalene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2-Chlorophenol | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2-Methylnaphthalene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2-Methylphenol | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 2-Nitrophenol | ND (0.507) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 3,3´-Dichlorobenzidine | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 3+4-Methylphenol | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 4-Bromophenyl-phenylether | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 4-Chloroaniline | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| 4-Nitrophenol | ND (1.01) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Acenaphthene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Acenaphthylene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Acetophenone | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Aniline | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Anthracene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Azobenzene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| **Benzo(a)anthracene** | **0.305** (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| **Benzo(a)pyrene** | **0.312** (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| **Benzo(b)fluoranthene** | **0.280** (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Benzo(g,h,i)perylene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-4 0-4
Date Sampled: 11/13/23 14:10
Percent Solids: 94
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/14/23 12:15

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| bis(2-Chloroethoxy)methane | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| bis(2-Chloroethyl)ether | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| bis(2-chloroisopropyl)Ether | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| bis(2-Ethylhexyl)phthalate | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Butylbenzylphthalate | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| **Chrysene** | **0.304** (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Dibenzo(a,h)Anthracene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Dibenzofuran | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Diethylphthalate | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Dimethylphthalate | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Di-n-butylphthalate | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Di-n-octylphthalate | ND (0.507) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| **Fluoranthene** | **0.625** (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Fluorene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Hexachlorobenzene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Hexachlorobutadiene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Hexachloroethane | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Indeno(1,2,3-cd)Pyrene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Isophorone | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Naphthalene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Nitrobenzene | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| N-Nitrosodimethylamine | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Pentachlorophenol | ND (1.01) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| **Phenanthrene** | **0.434** (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| Phenol | ND (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |
| **Pyrene** | **0.591** (0.253) | | 8270D | | 1 | 11/15/23 2:50 | D3K0299 | DK31403 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *83 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *101 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *85 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-4 0-4
Date Sampled: 11/13/23 14:10
Percent Solids: 94
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/14/23 12:15

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *86 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *85 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *81 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *84 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *104 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-4 0-4
Date Sampled: 11/13/23 14:10
Percent Solids: 94
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 23K0441
ESS Laboratory Sample ID: 23K0441-04
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 11/28/23 17:03

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Batch |
|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **20.1** (N/A) | | 1311 | | 1 | RAP | 11/29/23 9:06 | DK32850 |
| **Temperature (Max C)** | **21.5** (N/A) | | 1311 | | 1 | RAP | 11/29/23 9:06 | DK32850 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DK31407 - 7471B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Mercury | ND | 0.032 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Mercury | 9.44 | 3.09 | mg/kg wet | 17.10 | | 55 | 33.1-86.55 | | | |
| **LCS Dup** | | | | | | | | | | |
| Mercury | 9.78 | 3.09 | mg/kg wet | 17.10 | | 57 | 33.1-86.55 | 4 | 30 | |
| **Batch DK31419 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Antimony | ND | 5.00 | mg/kg wet | | | | | | | |
| Arsenic | ND | 2.50 | mg/kg wet | | | | | | | |
| Barium | ND | 2.50 | mg/kg wet | | | | | | | |
| Beryllium | ND | 0.11 | mg/kg wet | | | | | | | |
| Cadmium | ND | 0.50 | mg/kg wet | | | | | | | |
| Chromium | ND | 1.00 | mg/kg wet | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| Nickel | ND | 2.50 | mg/kg wet | | | | | | | |
| Selenium | ND | 5.00 | mg/kg wet | | | | | | | |
| Silver | ND | 0.50 | mg/kg wet | | | | | | | |
| Thallium | ND | 5.00 | mg/kg wet | | | | | | | |
| Vanadium | ND | 1.00 | mg/kg wet | | | | | | | |
| Zinc | ND | 2.50 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Antimony | 38.5 | 15.4 | mg/kg wet | 54.20 | | 71 | 40-160 | | | |
| Arsenic | 255 | 7.69 | mg/kg wet | 258.0 | | 99 | 80-120 | | | |
| Barium | 837 | 7.69 | mg/kg wet | 809.0 | | 103 | 80-120 | | | |
| Beryllium | 48.7 | 0.34 | mg/kg wet | 48.50 | | 100 | 80-120 | | | |
| Cadmium | 309 | 1.54 | mg/kg wet | 321.0 | | 96 | 80-120 | | | |
| Chromium | 123 | 3.08 | mg/kg wet | 133.0 | | 92 | 80-120 | | | |
| Lead | 103 | 15.4 | mg/kg wet | 102.0 | | 101 | 80-120 | | | |
| Nickel | 143 | 7.69 | mg/kg wet | 137.0 | | 105 | 80-120 | | | |
| Selenium | 50.6 | 15.4 | mg/kg wet | 49.40 | | 102 | 80-120 | | | |
| Silver | 23.4 | 1.54 | mg/kg wet | 22.70 | | 103 | 80-120 | | | |
| Thallium | 82.2 | 15.4 | mg/kg wet | 81.40 | | 101 | 80-120 | | | |
| Vanadium | 96.8 | 3.08 | mg/kg wet | 108.0 | | 90 | 80-120 | | | |
| Zinc | 518 | 7.69 | mg/kg wet | 540.0 | | 96 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Antimony | 41.0 | 15.9 | mg/kg wet | 54.20 | | 76 | 40-160 | 6 | 30 | |
| Arsenic | 289 | 7.94 | mg/kg wet | 258.0 | | 112 | 80-120 | 13 | 30 | |
| Barium | 879 | 7.94 | mg/kg wet | 809.0 | | 109 | 80-120 | 5 | 30 | |
| Beryllium | 55.2 | 0.35 | mg/kg wet | 48.50 | | 114 | 80-120 | 12 | 20 | |
| Cadmium | 345 | 1.59 | mg/kg wet | 321.0 | | 107 | 80-120 | 11 | 30 | |
| Chromium | 139 | 3.17 | mg/kg wet | 133.0 | | 104 | 80-120 | 12 | 30 | |
| Lead | 115 | 15.9 | mg/kg wet | 102.0 | | 113 | 80-120 | 11 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DK31419 - 3050B** | | | | | | | | | | |
| Nickel | 159 | 7.94 | mg/kg wet | 137.0 | | 116 | 80-120 | 10 | 30 | |
| Selenium | 56.0 | 15.9 | mg/kg wet | 49.40 | | 113 | 80-120 | 10 | 30 | |
| Silver | 26.0 | 1.59 | mg/kg wet | 22.70 | | 114 | 80-120 | 10 | 30 | |
| Thallium | 91.4 | 15.9 | mg/kg wet | 81.40 | | 112 | 80-120 | 11 | 30 | |
| Vanadium | 111 | 3.17 | mg/kg wet | 108.0 | | 103 | 80-120 | 14 | 30 | |
| Zinc | 580 | 7.94 | mg/kg wet | 540.0 | | 107 | 80-120 | 11 | 30 | |
| **1311 TCLP Metals** | | | | | | | | | | |
| **Batch DK32917 - 3005A_TCLP** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 0.050 | mg/L | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 0.446 | 0.050 | mg/L | 0.5000 | | 89 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 0.437 | 0.050 | mg/L | 0.5000 | | 87 | 80-120 | 2 | 20 | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DK31501 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 80 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 79 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 82 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 81 | 40-140 | 0.8 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 79 | 40-140 | 0.1 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DK31501 - 3540C** | | | | | | | | | | |
| Aroclor 1260 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 84 | 40-140 | 1 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 84 | 40-140 | 1 | 30 | |
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.03 | 0.025 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| 1,2-Dichlorobenzene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| 1,3-Dichlorobenzene | 2.06 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 30-130 | | | |
| 2,4-Dichlorophenol | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 30-130 | | | |
| 2,4-Dimethylphenol | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 30-130 | | | |
| 2,4-Dinitrophenol | 1.47 | 1.00 | mg/kg wet | 2.500 | | 59 | 30-130 | | | |
| 2,4-Dinitrotoluene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| 2-Chloronaphthalene | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| 2-Chlorophenol | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 30-130 | | | |
| 2-Methylnaphthalene | 1.84 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| 2-Methylphenol | 1.80 | 0.250 | mg/kg wet | 2.500 | | 72 | 30-130 | | | |
| 2-Nitrophenol | 1.89 | 0.500 | mg/kg wet | 2.500 | | 76 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| 3+4-Methylphenol | 3.64 | 0.250 | mg/kg wet | 5.000 | | 73 | 30-130 | | | |
| 4-Bromophenyl-phenylether | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| 4-Chloroaniline | 1.49 | 0.250 | mg/kg wet | 2.500 | | 60 | 40-140 | | | |
| 4-Nitrophenol | 1.42 | 1.00 | mg/kg wet | 2.500 | | 57 | 30-130 | | | |
| Acenaphthene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Acenaphthylene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| Acetophenone | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Aniline | 1.29 | 0.250 | mg/kg wet | 2.500 | | 52 | 40-140 | | | |
| Anthracene | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Azobenzene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Benzo(a)anthracene | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Benzo(a)pyrene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.64 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 1.63 | 0.250 | mg/kg wet | 2.500 | | 65 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 1.86 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.67 | 0.250 | mg/kg wet | 2.500 | | 67 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Butylbenzylphthalate | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Chrysene | 2.34 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| Dibenzofuran | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Diethylphthalate | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Dimethylphthalate | 2.29 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Di-n-butylphthalate | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Di-n-octylphthalate | 2.03 | 0.500 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Fluoranthene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Fluorene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Hexachlorobenzene | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| Hexachlorobutadiene | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Hexachloroethane | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Isophorone | 1.56 | 0.250 | mg/kg wet | 2.500 | | 62 | 40-140 | | | |
| Naphthalene | 1.77 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Nitrobenzene | 1.66 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | | | |
| N-Nitrosodimethylamine | 1.64 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | | | |
| Pentachlorophenol | 1.73 | 1.00 | mg/kg wet | 2.500 | | 69 | 30-130 | | | |
| Phenanthrene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Phenol | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 30-130 | | | |
| Pyrene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.16 | 0.025 | mg/kg wet | 2.500 | | 86 | 40-140 | 6 | 30 | |
| 1,2,4-Trichlorobenzene | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 5 | 30 | |
| 1,2-Dichlorobenzene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 2 | 30 | |
| 1,3-Dichlorobenzene | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 0.4 | 30 | |
| 1,4-Dichlorobenzene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 0.4 | 30 | |
| 2,4,5-Trichlorophenol | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 30-130 | 7 | 30 | |
| 2,4,6-Trichlorophenol | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 30-130 | 6 | 30 | |
| 2,4-Dichlorophenol | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 30-130 | 5 | 30 | |
| 2,4-Dimethylphenol | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 30-130 | 5 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| 2,4-Dinitrophenol | 1.70 | 1.00 | mg/kg wet | 2.500 | | 68 | 30-130 | 15 | 30 | |
| 2,4-Dinitrotoluene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 8 | 30 | |
| 2,6-Dinitrotoluene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 7 | 30 | |
| 2-Chloronaphthalene | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 2 | 30 | |
| 2-Chlorophenol | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 30-130 | 0.2 | 30 | |
| 2-Methylnaphthalene | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | 3 | 30 | |
| 2-Methylphenol | 1.79 | 0.250 | mg/kg wet | 2.500 | | 71 | 30-130 | 0.9 | 30 | |
| 2-Nitrophenol | 1.99 | 0.500 | mg/kg wet | 2.500 | | 79 | 30-130 | 5 | 30 | |
| 3,3´-Dichlorobenzidine | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 8 | 30 | |
| 3+4-Methylphenol | 3.62 | 0.250 | mg/kg wet | 5.000 | | 72 | 30-130 | 0.5 | 30 | |
| 4-Bromophenyl-phenylether | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | 9 | 30 | |
| 4-Chloroaniline | 1.50 | 0.250 | mg/kg wet | 2.500 | | 60 | 40-140 | 1 | 30 | |
| 4-Nitrophenol | 1.40 | 1.00 | mg/kg wet | 2.500 | | 56 | 30-130 | 2 | 30 | |
| Acenaphthene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 5 | 30 | |
| Acenaphthylene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 5 | 30 | |
| Acetophenone | 1.71 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | 4 | 30 | |
| Aniline | 1.36 | 0.250 | mg/kg wet | 2.500 | | 55 | 40-140 | 5 | 30 | |
| Anthracene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 2 | 30 | |
| Azobenzene | 1.86 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | 7 | 30 | |
| Benzo(a)anthracene | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 6 | 30 | |
| Benzo(a)pyrene | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 7 | 30 | |
| Benzo(b)fluoranthene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 6 | 30 | |
| Benzo(g,h,i)perylene | 2.89 | 0.250 | mg/kg wet | 2.500 | | 116 | 40-140 | 9 | 30 | |
| Benzo(k)fluoranthene | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 7 | 30 | |
| bis(2-Chloroethoxy)methane | 1.63 | 0.250 | mg/kg wet | 2.500 | | 65 | 40-140 | 0.03 | 30 | |
| bis(2-Chloroethyl)ether | 1.67 | 0.250 | mg/kg wet | 2.500 | | 67 | 40-140 | 11 | 30 | |
| bis(2-chloroisopropyl)Ether | 1.64 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | 2 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 3 | 30 | |
| Butylbenzylphthalate | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 4 | 30 | |
| Chrysene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 6 | 30 | |
| Dibenzo(a,h)Anthracene | 2.82 | 0.250 | mg/kg wet | 2.500 | | 113 | 40-140 | 7 | 30 | |
| Dibenzofuran | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 4 | 30 | |
| Diethylphthalate | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 1 | 30 | |
| Dimethylphthalate | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 4 | 30 | |
| Di-n-butylphthalate | 2.26 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 0.9 | 30 | |
| Di-n-octylphthalate | 2.12 | 0.500 | mg/kg wet | 2.500 | | 85 | 40-140 | 4 | 30 | |
| Fluoranthene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 2 | 30 | |
| Fluorene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 3 | 30 | |
| Hexachlorobenzene | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 3 | 30 | |
| Hexachlorobutadiene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 4 | 30 | |
| Hexachloroethane | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 3 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 6 | 30 | |
| Isophorone | 1.54 | 0.250 | mg/kg wet | 2.500 | | 62 | 40-140 | 1 | 30 | |
| Naphthalene | 1.81 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | 2 | 30 | |
| Nitrobenzene | 1.65 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | 0.3 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31306 - 3546** | | | | | | | | | | |
| N-Nitrosodimethylamine | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | 16 | 30 | |
| Pentachlorophenol | 1.81 | 1.00 | mg/kg wet | 2.500 | | 72 | 30-130 | 4 | 30 | |
| Phenanthrene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 3 | 30 | |
| Phenol | 1.61 | 0.250 | mg/kg wet | 2.500 | | 65 | 30-130 | 13 | 30 | |
| Pyrene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 4 | 30 | |
| **Batch DK31403 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31403 - 3546** | | | | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.07 | 0.025 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 2.01 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| 1,2-Dichlorobenzene | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| 1,3-Dichlorobenzene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 30-130 | | | |
| 2,4-Dichlorophenol | 2.03 | 0.250 | mg/kg wet | 2.500 | | 81 | 30-130 | | | |
| 2,4-Dimethylphenol | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 30-130 | | | |
| 2,4-Dinitrophenol | 1.95 | 1.00 | mg/kg wet | 2.500 | | 78 | 30-130 | | | |
| 2,4-Dinitrotoluene | 2.34 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.56 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | | | |
| 2-Chloronaphthalene | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| 2-Chlorophenol | 2.14 | 0.250 | mg/kg wet | 2.500 | | 86 | 30-130 | | | |
| 2-Methylnaphthalene | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| 2-Methylphenol | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 30-130 | | | |
| 2-Nitrophenol | 1.94 | 0.500 | mg/kg wet | 2.500 | | 78 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.36 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| 3+4-Methylphenol | 4.50 | 0.250 | mg/kg wet | 5.000 | | 90 | 30-130 | | | |
| 4-Bromophenyl-phenylether | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| 4-Chloroaniline | 1.84 | 0.250 | mg/kg wet | 2.500 | | 73 | 40-140 | | | |
| 4-Nitrophenol | 2.18 | 1.00 | mg/kg wet | 2.500 | | 87 | 30-130 | | | |
| Acenaphthene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31403 - 3546** | | | | | | | | | | |
| Acenaphthylene | 2.19 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Acetophenone | 1.97 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| Aniline | 1.81 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | | | |
| Anthracene | 2.36 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Azobenzene | 2.02 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Benzo(a)anthracene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Benzo(a)pyrene | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.58 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 1.79 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.86 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| Butylbenzylphthalate | 2.61 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Chrysene | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Dibenzofuran | 2.24 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Diethylphthalate | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Dimethylphthalate | 2.39 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Di-n-butylphthalate | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Di-n-octylphthalate | 2.61 | 0.500 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Fluoranthene | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Fluorene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Hexachlorobenzene | 2.34 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| Hexachlorobutadiene | 1.98 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| Hexachloroethane | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.50 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Isophorone | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Naphthalene | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 40-140 | | | |
| Nitrobenzene | 1.88 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| N-Nitrosodimethylamine | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Pentachlorophenol | 2.15 | 1.00 | mg/kg wet | 2.500 | | 86 | 30-130 | | | |
| Phenanthrene | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Phenol | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 30-130 | | | |
| Pyrene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.13 | 0.025 | mg/kg wet | 2.500 | | 85 | 40-140 | 3 | 30 | |
| 1,2,4-Trichlorobenzene | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | 3 | 30 | |
| 1,2-Dichlorobenzene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 0.4 | 30 | |
| 1,3-Dichlorobenzene | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 2 | 30 | |
| 1,4-Dichlorobenzene | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 0.5 | 30 | |
| 2,4,5-Trichlorophenol | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 30-130 | 2 | 30 | |
| 2,4,6-Trichlorophenol | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 30-130 | 2 | 30 | |
| 2,4-Dichlorophenol | 2.01 | 0.250 | mg/kg wet | 2.500 | | 80 | 30-130 | 1 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DK31403 - 3546** | | | | | | | | | | |
| 2,4-Dimethylphenol | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 30-130 | 0.5 | 30 | |
| 2,4-Dinitrophenol | 2.03 | 1.00 | mg/kg wet | 2.500 | | 81 | 30-130 | 4 | 30 | |
| 2,4-Dinitrotoluene | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 2 | 30 | |
| 2,6-Dinitrotoluene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 2 | 30 | |
| 2-Chloronaphthalene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 0.7 | 30 | |
| 2-Chlorophenol | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 30-130 | 1 | 30 | |
| 2-Methylnaphthalene | 1.98 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | 2 | 30 | |
| 2-Methylphenol | 2.19 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | 1 | 30 | |
| 2-Nitrophenol | 1.95 | 0.500 | mg/kg wet | 2.500 | | 78 | 30-130 | 0.4 | 30 | |
| 3,3´-Dichlorobenzidine | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 0.4 | 30 | |
| 3+4-Methylphenol | 4.61 | 0.250 | mg/kg wet | 5.000 | | 92 | 30-130 | 2 | 30 | |
| 4-Bromophenyl-phenylether | 2.39 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 3 | 30 | |
| 4-Chloroaniline | 1.88 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | 3 | 30 | |
| 4-Nitrophenol | 2.20 | 1.00 | mg/kg wet | 2.500 | | 88 | 30-130 | 1 | 30 | |
| Acenaphthene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | 1 | 30 | |
| Acenaphthylene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | 2 | 30 | |
| Acetophenone | 2.01 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 2 | 30 | |
| Aniline | 1.86 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | 2 | 30 | |
| Anthracene | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 3 | 30 | |
| Azobenzene | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 3 | 30 | |
| Benzo(a)anthracene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 0.06 | 30 | |
| Benzo(a)pyrene | 2.66 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 1 | 30 | |
| Benzo(b)fluoranthene | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 3 | 30 | |
| Benzo(g,h,i)perylene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 0.3 | 30 | |
| Benzo(k)fluoranthene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 0.8 | 30 | |
| bis(2-Chloroethoxy)methane | 1.81 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | 1 | 30 | |
| bis(2-Chloroethyl)ether | 1.93 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | 1 | 30 | |
| bis(2-chloroisopropyl)Ether | 1.84 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | 0.8 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.69 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 2 | 30 | |
| Butylbenzylphthalate | 2.64 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 1 | 30 | |
| Chrysene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 1 | 30 | |
| Dibenzo(a,h)Anthracene | 2.58 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 4 | 30 | |
| Dibenzofuran | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 2 | 30 | |
| Diethylphthalate | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 1 | 30 | |
| Dimethylphthalate | 2.41 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 1 | 30 | |
| Di-n-butylphthalate | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 2 | 30 | |
| Di-n-octylphthalate | 2.75 | 0.500 | mg/kg wet | 2.500 | | 110 | 40-140 | 5 | 30 | |
| Fluoranthene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 1 | 30 | |
| Fluorene | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 2 | 30 | |
| Hexachlorobenzene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 2 | 30 | |
| Hexachlorobutadiene | 2.06 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 4 | 30 | |
| Hexachloroethane | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 0.9 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.58 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 3 | 30 | |
| Isophorone | 1.81 | 0.250 | mg/kg wet | 2.500 | | 73 | 40-140 | 2 | 30 | |
| Naphthalene | 1.88 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | 3 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

## Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8270D Semi-Volatile Organic Compounds | | | | | | | | | | |
| **Batch DK31403 - 3546** | | | | | | | | | | |
| Nitrobenzene | 1.91 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | 2 | 30 | |
| N-Nitrosodimethylamine | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 1 | 30 | |
| Pentachlorophenol | 2.19 | 1.00 | mg/kg wet | 2.500 | | 87 | 30-130 | 2 | 30 | |
| Phenanthrene | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 2 | 30 | |
| Phenol | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | 3 | 30 | |
| Pyrene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 1 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23K0441

**Notes and Definitions**

| | |
|---|---|
| Z18 | Temperature is not within 23 +/-2 ºC. |
| U | Analyte included in the analysis, but not detected |
| Q | Calibration required quadratic regression (Q). |
| EL | Elevated Method Reporting Limits due to sample matrix (EL). |
| D | Diluted. |
| CD+ | Continuing Calibration %Diff/Drift is above control limit (CD+). |
| CD- | Continuing Calibration %Diff/Drift is below control limit (CD-). |
| BT | Benzidine tailing factor >2. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23K0441

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: Client

ESS Project ID: 23K0441
Date Received: 11/13/2023
Project Due Date: 11/20/2023
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 7.1 Iced with: Ice Pack
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 493046 | Yes | N/A | Yes | 8 oz jar | NP | |
| 1 | 493047 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 493048 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 493049 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 493050 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 493051 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 493052 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 493053 | Yes | N/A | Yes | 8 oz jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials
Are barcode labels on correct containers? Yes / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 23K0441

Date Received: 11/13/2023

By: [signature] Date & Time: 11/13/23. 1556

Reviewed By: [signature] Date & Time: 11/13/23 1601

# CHAIN OF CUSTODY

ESS Lab # 23K0441 | Page 1 of 1

ESS LABORATORY
185 Frances Avenue
Cranston, RI 02910
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

Turn Time (Days) ☐>5 ☑5 ☐4 ☐3 ☐2 ☐1 ☐ Same Day
Regulatory State: MA Criteria: MCP S-1
Is this project for any of the following?:
☑ CT RCP ☑ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

**ELECTRONIC DELIVERABLES (Final Reports are PDF)**
☑ Limit Checker ☐ State Forms ☐ EQuIS
☑ Excel ☐ State Upload ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

## CLIENT INFORMATION

Client: CEC
Address: 32 Bellows Rd Raynham, MA
Phone: 774-501-2176
Email Distribution List: JKitchen@cecinc.com cdalbello@cecinc.com

## PROJECT INFORMATION

Project Name: MASS CEC
Project Location: 4 Wright St - New Bedford
Project Number: 332-344
Project Manager: Jon Kitchen / Cassia Dal Bello
Bill to: Client
PO#:
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

## REQUESTED ANALYSES

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCBs | MCP Metals | SVOCs | TCLP Pb - JA 11/28/23 | Total Number of Bottles |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11-13 | 11:40 | Comp | Soil | CEC-1-4 (0-4) | X | X | X | | 2 |
| 2 | 11-13 | 10:20 | Comp | Soil | CEC-2-4 (0-4) | X | X | X | | 2 |
| 3 | 11-13 | 13:15 | Comp | Soil | CEC-6-4 (0-4) | X | X | X | | 2 |
| 4 | 11-13 | 14:10 | Comp | Soil | CEC-5-4 (0-4) | X | X | X | X | 2 |

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — J
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 40
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1
Number of Bottles per Sample: 2

8

Sampled by : DAVE BARBOZA (DB)

**Chain needs to be filled out neatly and completely for on time delivery.**

**Laboratory Use Only**
Cooler Temperature (°C): 7.1 ICOR

**Comments:** * Please specify "Other" preservative and containers types in this space

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

**Dissolved Filtration**
☐ Lab Filter

| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
|---|---|---|---|---|---|---|---|
| [signature] | 11-13-23 | 15:20 | [signature] | | | | |
| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
| | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC - New Bedford (332-344)**
**ESS Laboratory Work Order Number: 23L0197**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 3:42 pm, Dec 15, 2023**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0197

## SAMPLE RECEIPT

The following samples were received on December 07, 2023 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 23L0197-01 | CEC-7-2 8-10 | Soil | 8082A |
| 23L0197-02 | CEC-8-2 2-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23L0197-03 | CEC-8-2 4-8 | Soil | 8082A |
| 23L0197-04 | CEC-1-2 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23L0197-05 | CEC-4-2 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23L0197-06 | CEC-4-2 4.5-7.5 | Soil | 8082A |
| 23L0197-07 | CEC-7-2 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23L0197-08 | CEC-7-2 4-8 | Soil | 8082A |
| 23L0197-09 | CEC-5-2 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23L0197-10 | CEC-6-2 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23L0197-11 | CEC-3-2 0.3-4 | Soil | 6010C, 7471B, 8082A, 8270D |
| 23L0197-12 | CEC-2-2 0-4 | Soil | 6010C, 7471B, 8082A, 8270D |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23L0197

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**

23L0197-05 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

**8270D Semi-Volatile Organic Compounds**

D3L0183-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (130% @ 80-120%)

D3L0183-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4-Dinitrophenol (30% @ 20%), 2,6-Dinitrotoluene (22% @ 20%), 3,3´-Dichlorobenzidine (24% @ 20%), Hexachlorobutadiene (25% @ 20%)

D3L0205-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (138% @ 80-120%)

D3L0205-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4-Dinitrophenol (38% @ 20%), 3,3´-Dichlorobenzidine (26% @ 20%), Benzo(b)fluoranthene (21% @ 20%), bis(2-Ethylhexyl)phthalate (29% @ 20%), Butylbenzylphthalate (27% @ 20%), Hexachlorobutadiene (25% @ 20%)

**Total Metals**

DL30806-BSD1 **Blank Spike recovery is below lower control limit (B-).**
Cadmium (79% @ 80-120%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23L0197

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0197

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **23L0197-01 through 23L0197-12**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | (x) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| (x) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: Laurel Stoddard Date: December 15, 2023

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-7-2 8-10
Date Sampled: 12/05/23 12:50
Percent Solids: 86
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/8/23 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 12/11/23 13:16 | | DL30801 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 12/11/23 13:16 | | DL30801 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 12/11/23 13:16 | | DL30801 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 12/11/23 13:16 | | DL30801 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 12/11/23 13:16 | | DL30801 |
| **Aroclor 1254** | **0.3** (0.06) | | 8082A | | 1 | 12/11/23 13:16 | | DL30801 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 12/11/23 13:16 | | DL30801 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 12/11/23 13:16 | | DL30801 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 12/11/23 13:16 | | DL30801 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *51 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *57 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-8-2 2-4
Date Sampled: 12/05/23 14:00
Percent Solids: 93

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (3.75) | | 6010C | | 1 | CEV | 12/08/23 19:28 | 2.88 | 100 | DL30806 |
| Arsenic | ND (1.88) | | 6010C | | 1 | CEV | 12/08/23 19:28 | 2.88 | 100 | DL30806 |
| **Barium** | **20.5** (1.88) | | 6010C | | 1 | CEV | 12/08/23 19:28 | 2.88 | 100 | DL30806 |
| **Beryllium** | **0.23** (0.08) | | 6010C | | 1 | CEV | 12/08/23 19:28 | 2.88 | 100 | DL30806 |
| Cadmium | ND (0.38) | | 6010C | | 1 | CEV | 12/08/23 19:28 | 2.88 | 100 | DL30806 |
| **Chromium** | **11.5** (0.75) | | 6010C | | 1 | CEV | 12/08/23 19:28 | 2.88 | 100 | DL30806 |
| **Lead** | **49.7** (3.75) | | 6010C | | 1 | CEV | 12/08/23 19:28 | 2.88 | 100 | DL30806 |
| **Mercury** | **0.089** (0.032) | | 7471B | | 1 | AFV | 12/08/23 15:36 | 0.67 | 40 | DL30807 |
| **Nickel** | **7.02** (1.88) | | 6010C | | 1 | CEV | 12/08/23 19:28 | 2.88 | 100 | DL30806 |
| Selenium | ND (3.75) | | 6010C | | 1 | CEV | 12/08/23 19:28 | 2.88 | 100 | DL30806 |
| Silver | ND (0.38) | | 6010C | | 1 | CEV | 12/08/23 19:28 | 2.88 | 100 | DL30806 |
| Thallium | ND (3.75) | | 6010C | | 1 | CEV | 12/08/23 19:28 | 2.88 | 100 | DL30806 |
| **Vanadium** | **13.0** (0.75) | | 6010C | | 1 | CEV | 12/08/23 19:28 | 2.88 | 100 | DL30806 |
| **Zinc** | **47.3** (1.88) | | 6010C | | 1 | CEV | 12/08/23 19:28 | 2.88 | 100 | DL30806 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-8-2 2-4
Date Sampled: 12/05/23 14:00
Percent Solids: 93
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/8/23 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 12/11/23 13:36 | | DL30801 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 12/11/23 13:36 | | DL30801 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 12/11/23 13:36 | | DL30801 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 12/11/23 13:36 | | DL30801 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 12/11/23 13:36 | | DL30801 |
| **Aroclor 1254 [2C]** | **6.9** (0.5) | | 8082A | | 10 | 12/11/23 19:57 | | DL30801 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 12/11/23 13:36 | | DL30801 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 12/11/23 13:36 | | DL30801 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 12/11/23 13:36 | | DL30801 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *68 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-8-2 2-4
Date Sampled: 12/05/23 14:00
Percent Solids: 93
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 1,2,4-Trichlorobenzene | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 1,2-Dichlorobenzene | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 1,3-Dichlorobenzene | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 1,4-Dichlorobenzene | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 2,4,5-Trichlorophenol | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 2,4,6-Trichlorophenol | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 2,4-Dichlorophenol | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 2,4-Dimethylphenol | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 2,4-Dinitrophenol | ND (1.13) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 2,4-Dinitrotoluene | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 2,6-Dinitrotoluene | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 2-Chloronaphthalene | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 2-Chlorophenol | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 2-Methylnaphthalene | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 2-Methylphenol | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 2-Nitrophenol | ND (0.566) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 3,3′-Dichlorobenzidine | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 3+4-Methylphenol | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 4-Bromophenyl-phenylether | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 4-Chloroaniline | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| 4-Nitrophenol | ND (1.13) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Acenaphthene | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Acenaphthylene | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Acetophenone | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Aniline | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Anthracene | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Azobenzene | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| **Benzo(a)anthracene** | **0.507** (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| **Benzo(a)pyrene** | **0.494** (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| **Benzo(b)fluoranthene** | **0.419** (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| **Benzo(g,h,i)perylene** | **0.338** (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-8-2 2-4
Date Sampled: 12/05/23 14:00
Percent Solids: 93
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Benzo(k)fluoranthene** | **0.370** (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| bis(2-Chloroethoxy)methane | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| bis(2-Chloroethyl)ether | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| bis(2-chloroisopropyl)Ether | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| bis(2-Ethylhexyl)phthalate | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Butylbenzylphthalate | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| **Chrysene** | **0.451** (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Dibenzo(a,h)Anthracene | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Dibenzofuran | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Diethylphthalate | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Dimethylphthalate | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Di-n-butylphthalate | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Di-n-octylphthalate | ND (0.566) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| **Fluoranthene** | **1.01** (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Fluorene | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Hexachlorobenzene | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Hexachlorobutadiene | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Hexachloroethane | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| **Indeno(1,2,3-cd)Pyrene** | **0.333** (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Isophorone | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Naphthalene | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Nitrobenzene | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| N-Nitrosodimethylamine | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Pentachlorophenol | ND (1.13) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| **Phenanthrene** | **0.521** (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| Phenol | ND (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |
| **Pyrene** | **0.894** (0.283) | | 8270D | | 1 | 12/11/23 22:25 | D3L0205 | DL30804 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *86 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *96 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *89 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-8-2 2-4
Date Sampled: 12/05/23 14:00
Percent Solids: 93
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *86 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *94 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *91 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *90 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *94 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-8-2 4-8
Date Sampled: 12/05/23 14:15
Percent Solids: 89
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/8/23 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 12/11/23 13:56 | | DL30801 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 12/11/23 13:56 | | DL30801 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 12/11/23 13:56 | | DL30801 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 12/11/23 13:56 | | DL30801 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 12/11/23 13:56 | | DL30801 |
| **Aroclor 1254 [2C]** | **3.5** (0.3) | | 8082A | | 5 | 12/11/23 20:17 | | DL30801 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 12/11/23 13:56 | | DL30801 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 12/11/23 13:56 | | DL30801 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 12/11/23 13:56 | | DL30801 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *65 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-2 0-4
Date Sampled: 12/05/23 09:00
Percent Solids: 91

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (3.99) | | 6010C | | 1 | CEV | 12/08/23 19:30 | 2.76 | 100 | DL30806 |
| Arsenic | ND (2.00) | | 6010C | | 1 | CEV | 12/08/23 19:30 | 2.76 | 100 | DL30806 |
| **Barium** | **12.0** (2.00) | | 6010C | | 1 | CEV | 12/08/23 19:30 | 2.76 | 100 | DL30806 |
| **Beryllium** | **0.21** (0.09) | | 6010C | | 1 | CEV | 12/08/23 19:30 | 2.76 | 100 | DL30806 |
| Cadmium | ND (0.40) | | 6010C | | 1 | CEV | 12/08/23 19:30 | 2.76 | 100 | DL30806 |
| **Chromium** | **6.44** (0.80) | | 6010C | | 1 | CEV | 12/08/23 19:30 | 2.76 | 100 | DL30806 |
| **Lead** | **11.5** (3.99) | | 6010C | | 1 | CEV | 12/08/23 19:30 | 2.76 | 100 | DL30806 |
| Mercury | ND (0.036) | | 7471B | | 1 | AFV | 12/08/23 15:38 | 0.61 | 40 | DL30807 |
| **Nickel** | **5.56** (2.00) | | 6010C | | 1 | CEV | 12/08/23 19:30 | 2.76 | 100 | DL30806 |
| Selenium | ND (3.99) | | 6010C | | 1 | CEV | 12/08/23 19:30 | 2.76 | 100 | DL30806 |
| Silver | ND (0.40) | | 6010C | | 1 | CEV | 12/08/23 19:30 | 2.76 | 100 | DL30806 |
| Thallium | ND (3.99) | | 6010C | | 1 | CEV | 12/08/23 19:30 | 2.76 | 100 | DL30806 |
| **Vanadium** | **9.65** (0.80) | | 6010C | | 1 | CEV | 12/08/23 19:30 | 2.76 | 100 | DL30806 |
| **Zinc** | **23.1** (2.00) | | 6010C | | 1 | CEV | 12/08/23 19:30 | 2.76 | 100 | DL30806 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-2 0-4
Date Sampled: 12/05/23 09:00
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/8/23 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 12/11/23 14:16 | | DL30801 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 12/11/23 14:16 | | DL30801 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 12/11/23 14:16 | | DL30801 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 12/11/23 14:16 | | DL30801 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 12/11/23 14:16 | | DL30801 |
| **Aroclor 1254** | **0.4** (0.05) | | 8082A | | 1 | 12/11/23 14:16 | | DL30801 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 12/11/23 14:16 | | DL30801 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 12/11/23 14:16 | | DL30801 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 12/11/23 14:16 | | DL30801 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *62 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-2 0-4
Date Sampled: 12/05/23 09:00
Percent Solids: 91
Initial Volume: 20.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 1,2,4-Trichlorobenzene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 1,2-Dichlorobenzene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 1,3-Dichlorobenzene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 1,4-Dichlorobenzene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 2,4,5-Trichlorophenol | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 2,4,6-Trichlorophenol | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 2,4-Dichlorophenol | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 2,4-Dimethylphenol | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 2,4-Dinitrophenol | ND (1.07) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 2,4-Dinitrotoluene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 2,6-Dinitrotoluene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 2-Chloronaphthalene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 2-Chlorophenol | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 2-Methylnaphthalene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 2-Methylphenol | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 2-Nitrophenol | ND (0.535) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 3,3′-Dichlorobenzidine | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 3+4-Methylphenol | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 4-Bromophenyl-phenylether | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 4-Chloroaniline | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| 4-Nitrophenol | ND (1.07) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Acenaphthene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Acenaphthylene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Acetophenone | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Aniline | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Anthracene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Azobenzene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Benzo(a)anthracene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Benzo(a)pyrene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Benzo(b)fluoranthene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Benzo(g,h,i)perylene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-2 0-4
Date Sampled: 12/05/23 09:00
Percent Solids: 91
Initial Volume: 20.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| bis(2-Chloroethoxy)methane | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| bis(2-Chloroethyl)ether | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| bis(2-chloroisopropyl)Ether | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| bis(2-Ethylhexyl)phthalate | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Butylbenzylphthalate | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Chrysene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Dibenzo(a,h)Anthracene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Dibenzofuran | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Diethylphthalate | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Dimethylphthalate | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Di-n-butylphthalate | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Di-n-octylphthalate | ND (0.535) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Fluoranthene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Fluorene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Hexachlorobenzene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Hexachlorobutadiene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Hexachloroethane | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Indeno(1,2,3-cd)Pyrene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Isophorone | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Naphthalene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Nitrobenzene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| N-Nitrosodimethylamine | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Pentachlorophenol | ND (1.07) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Phenanthrene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Phenol | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |
| Pyrene | ND (0.267) | | 8270D | | 1 | 12/11/23 22:56 | D3L0205 | DL30804 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *83 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *97 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *88 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-1-2 0-4
Date Sampled: 12/05/23 09:00
Percent Solids: 91
Initial Volume: 20.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *87 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *90 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *86 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *88 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *98 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-2 0-4
Date Sampled: 12/05/23 11:00
Percent Solids: 93

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-05
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.16) | | 6010C | | 1 | CEV | 12/08/23 19:32 | 2.58 | 100 | DL30806 |
| Arsenic | ND (2.08) | | 6010C | | 1 | CEV | 12/08/23 19:32 | 2.58 | 100 | DL30806 |
| **Barium** | **8.36** (2.08) | | 6010C | | 1 | CEV | 12/08/23 19:32 | 2.58 | 100 | DL30806 |
| **Beryllium** | **0.17** (0.09) | | 6010C | | 1 | CEV | 12/08/23 19:32 | 2.58 | 100 | DL30806 |
| Cadmium | ND (0.42) | | 6010C | | 1 | CEV | 12/08/23 19:32 | 2.58 | 100 | DL30806 |
| **Chromium** | **4.05** (0.83) | | 6010C | | 1 | CEV | 12/08/23 19:32 | 2.58 | 100 | DL30806 |
| **Lead** | **7.64** (4.16) | | 6010C | | 1 | CEV | 12/08/23 19:32 | 2.58 | 100 | DL30806 |
| Mercury | ND (0.033) | | 7471B | | 1 | AFV | 12/08/23 15:40 | 0.65 | 40 | DL30807 |
| **Nickel** | **3.70** (2.08) | | 6010C | | 1 | CEV | 12/08/23 19:32 | 2.58 | 100 | DL30806 |
| Selenium | ND (4.16) | | 6010C | | 1 | CEV | 12/08/23 19:32 | 2.58 | 100 | DL30806 |
| Silver | ND (0.42) | | 6010C | | 1 | CEV | 12/08/23 19:32 | 2.58 | 100 | DL30806 |
| Thallium | ND (4.16) | | 6010C | | 1 | CEV | 12/08/23 19:32 | 2.58 | 100 | DL30806 |
| **Vanadium** | **7.70** (0.83) | | 6010C | | 1 | CEV | 12/08/23 19:32 | 2.58 | 100 | DL30806 |
| **Zinc** | **14.9** (2.08) | | 6010C | | 1 | CEV | 12/08/23 19:32 | 2.58 | 100 | DL30806 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-2 0-4
Date Sampled: 12/05/23 11:00
Percent Solids: 93
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/8/23 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (1.1) | | 8082A | | 20 | 12/11/23 20:37 | | DL30801 |
| Aroclor 1221 | ND (1.1) | | 8082A | | 20 | 12/11/23 20:37 | | DL30801 |
| Aroclor 1232 | ND (1.1) | | 8082A | | 20 | 12/11/23 20:37 | | DL30801 |
| Aroclor 1242 | ND (1.1) | | 8082A | | 20 | 12/11/23 20:37 | | DL30801 |
| Aroclor 1248 | ND (1.1) | | 8082A | | 20 | 12/11/23 20:37 | | DL30801 |
| **Aroclor 1254 [2C]** | **11.2** (1.1) | | 8082A | | 20 | 12/11/23 20:37 | | DL30801 |
| Aroclor 1260 | ND (1.1) | | 8082A | | 20 | 12/11/23 20:37 | | DL30801 |
| Aroclor 1262 | ND (1.1) | | 8082A | | 20 | 12/11/23 20:37 | | DL30801 |
| Aroclor 1268 | ND (1.1) | | 8082A | | 20 | 12/11/23 20:37 | | DL30801 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | % | SD | 30-150 |
| *Surrogate: Tetrachloro-m-xylene* | % | SD | 30-150 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-2 0-4
Date Sampled: 12/05/23 11:00
Percent Solids: 93
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 1,2,4-Trichlorobenzene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 1,2-Dichlorobenzene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 1,3-Dichlorobenzene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 1,4-Dichlorobenzene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 2,4,5-Trichlorophenol | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 2,4,6-Trichlorophenol | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 2,4-Dichlorophenol | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 2,4-Dimethylphenol | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 2,4-Dinitrophenol | ND (1.11) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 2,4-Dinitrotoluene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 2,6-Dinitrotoluene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 2-Chloronaphthalene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 2-Chlorophenol | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 2-Methylnaphthalene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 2-Methylphenol | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 2-Nitrophenol | ND (0.553) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 3,3′-Dichlorobenzidine | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 3+4-Methylphenol | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 4-Bromophenyl-phenylether | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 4-Chloroaniline | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| 4-Nitrophenol | ND (1.11) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Acenaphthene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Acenaphthylene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Acetophenone | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Aniline | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Anthracene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Azobenzene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Benzo(a)anthracene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Benzo(a)pyrene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Benzo(b)fluoranthene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Benzo(g,h,i)perylene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-2 0-4
Date Sampled: 12/05/23 11:00
Percent Solids: 93
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| bis(2-Chloroethoxy)methane | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| bis(2-Chloroethyl)ether | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| bis(2-chloroisopropyl)Ether | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| bis(2-Ethylhexyl)phthalate | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Butylbenzylphthalate | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Chrysene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Dibenzo(a,h)Anthracene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Dibenzofuran | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Diethylphthalate | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Dimethylphthalate | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Di-n-butylphthalate | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Di-n-octylphthalate | ND (0.553) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Fluoranthene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Fluorene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Hexachlorobenzene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Hexachlorobutadiene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Hexachloroethane | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Indeno(1,2,3-cd)Pyrene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Isophorone | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Naphthalene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Nitrobenzene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| N-Nitrosodimethylamine | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Pentachlorophenol | ND (1.11) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Phenanthrene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Phenol | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |
| Pyrene | ND (0.276) | | 8270D | | 1 | 12/11/23 23:27 | D3L0205 | DL30804 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *82 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *90 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *88 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-2 0-4
Date Sampled: 12/05/23 11:00
Percent Solids: 93
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *87 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *91 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *85 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *91 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *95 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-4-2 4.5-7.5
Date Sampled: 12/05/23 11:15
Percent Solids: 92
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/8/23 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 12/11/23 14:56 | | DL30801 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 12/11/23 14:56 | | DL30801 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 12/11/23 14:56 | | DL30801 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 12/11/23 14:56 | | DL30801 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 12/11/23 14:56 | | DL30801 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 12/11/23 14:56 | | DL30801 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 12/11/23 14:56 | | DL30801 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 12/11/23 14:56 | | DL30801 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 12/11/23 14:56 | | DL30801 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *78 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-7-2 0-4
Date Sampled: 12/05/23 12:30
Percent Solids: 92

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-07
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.27) | | 6010C | | 1 | CEV | 12/08/23 19:34 | 2.54 | 100 | DL30806 |
| Arsenic | ND (2.13) | | 6010C | | 1 | CEV | 12/08/23 19:34 | 2.54 | 100 | DL30806 |
| **Barium** | **9.95** (2.13) | | 6010C | | 1 | CEV | 12/08/23 19:34 | 2.54 | 100 | DL30806 |
| **Beryllium** | **0.16** (0.09) | | 6010C | | 1 | CEV | 12/08/23 19:34 | 2.54 | 100 | DL30806 |
| Cadmium | ND (0.43) | | 6010C | | 1 | CEV | 12/08/23 19:34 | 2.54 | 100 | DL30806 |
| **Chromium** | **6.12** (0.85) | | 6010C | | 1 | CEV | 12/08/23 19:34 | 2.54 | 100 | DL30806 |
| **Lead** | **15.2** (4.27) | | 6010C | | 1 | CEV | 12/08/23 19:34 | 2.54 | 100 | DL30806 |
| **Mercury** | **0.032** (0.032) | | 7471B | | 1 | AFV | 12/08/23 15:42 | 0.68 | 40 | DL30807 |
| **Nickel** | **4.02** (2.13) | | 6010C | | 1 | CEV | 12/08/23 19:34 | 2.54 | 100 | DL30806 |
| Selenium | ND (4.27) | | 6010C | | 1 | CEV | 12/08/23 19:34 | 2.54 | 100 | DL30806 |
| Silver | ND (0.43) | | 6010C | | 1 | CEV | 12/08/23 19:34 | 2.54 | 100 | DL30806 |
| Thallium | ND (4.27) | | 6010C | | 1 | CEV | 12/08/23 19:34 | 2.54 | 100 | DL30806 |
| **Vanadium** | **9.18** (0.85) | | 6010C | | 1 | CEV | 12/08/23 19:34 | 2.54 | 100 | DL30806 |
| **Zinc** | **21.9** (2.13) | | 6010C | | 1 | CEV | 12/08/23 19:34 | 2.54 | 100 | DL30806 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-7-2 0-4
Date Sampled: 12/05/23 12:30
Percent Solids: 92
Initial Volume: 20.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/8/23 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 12/11/23 15:15 | | DL30801 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 12/11/23 15:15 | | DL30801 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 12/11/23 15:15 | | DL30801 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 12/11/23 15:15 | | DL30801 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 12/11/23 15:15 | | DL30801 |
| **Aroclor 1254 [2C]** | **0.4** (0.05) | | 8082A | | 1 | 12/11/23 15:15 | | DL30801 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 12/11/23 15:15 | | DL30801 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 12/11/23 15:15 | | DL30801 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 12/11/23 15:15 | | DL30801 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-7-2 0-4
Date Sampled: 12/05/23 12:30
Percent Solids: 92
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 1,2,4-Trichlorobenzene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 1,2-Dichlorobenzene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 1,3-Dichlorobenzene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 1,4-Dichlorobenzene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 2,4,5-Trichlorophenol | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 2,4,6-Trichlorophenol | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 2,4-Dichlorophenol | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 2,4-Dimethylphenol | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 2,4-Dinitrophenol | ND (1.12) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 2,4-Dinitrotoluene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 2,6-Dinitrotoluene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 2-Chloronaphthalene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 2-Chlorophenol | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 2-Methylnaphthalene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 2-Methylphenol | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 2-Nitrophenol | ND (0.562) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 3,3′-Dichlorobenzidine | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 3+4-Methylphenol | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 4-Bromophenyl-phenylether | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 4-Chloroaniline | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| 4-Nitrophenol | ND (1.12) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Acenaphthene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Acenaphthylene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Acetophenone | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Aniline | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Anthracene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Azobenzene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Benzo(a)anthracene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Benzo(a)pyrene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Benzo(b)fluoranthene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Benzo(g,h,i)perylene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-7-2 0-4
Date Sampled: 12/05/23 12:30
Percent Solids: 92
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| bis(2-Chloroethoxy)methane | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| bis(2-Chloroethyl)ether | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| bis(2-chloroisopropyl)Ether | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| bis(2-Ethylhexyl)phthalate | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Butylbenzylphthalate | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Chrysene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Dibenzo(a,h)Anthracene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Dibenzofuran | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Diethylphthalate | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Dimethylphthalate | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Di-n-butylphthalate | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Di-n-octylphthalate | ND (0.562) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Fluoranthene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Fluorene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Hexachlorobenzene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Hexachlorobutadiene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Hexachloroethane | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Indeno(1,2,3-cd)Pyrene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Isophorone | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Naphthalene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Nitrobenzene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| N-Nitrosodimethylamine | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Pentachlorophenol | ND (1.12) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Phenanthrene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Phenol | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |
| Pyrene | ND (0.281) | | 8270D | | 1 | 12/11/23 23:57 | D3L0205 | DL30804 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *86 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *100 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *90 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-7-2 0-4
Date Sampled: 12/05/23 12:30
Percent Solids: 92
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *87 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *93 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *89 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *92 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *98 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-7-2 4-8
Date Sampled: 12/05/23 12:40
Percent Solids: 87
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/8/23 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 12/11/23 15:35 | | DL30801 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 12/11/23 15:35 | | DL30801 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 12/11/23 15:35 | | DL30801 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 12/11/23 15:35 | | DL30801 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 12/11/23 15:35 | | DL30801 |
| **Aroclor 1254** | **0.3** (0.06) | | 8082A | | 1 | 12/11/23 15:35 | | DL30801 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 12/11/23 15:35 | | DL30801 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 12/11/23 15:35 | | DL30801 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 12/11/23 15:35 | | DL30801 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *66 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-2 0-4
Date Sampled: 12/06/23 09:00
Percent Solids: 90

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-09
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (3.82) | | 6010C | | 1 | CEV | 12/08/23 19:36 | 2.92 | 100 | DL30806 |
| Arsenic | ND (1.91) | | 6010C | | 1 | CEV | 12/08/23 19:36 | 2.92 | 100 | DL30806 |
| **Barium** | **19.0** (1.91) | | 6010C | | 1 | CEV | 12/08/23 19:36 | 2.92 | 100 | DL30806 |
| **Beryllium** | **0.18** (0.08) | | 6010C | | 1 | CEV | 12/08/23 19:36 | 2.92 | 100 | DL30806 |
| Cadmium | ND (0.38) | | 6010C | | 1 | CEV | 12/08/23 19:36 | 2.92 | 100 | DL30806 |
| **Chromium** | **7.68** (0.76) | | 6010C | | 1 | CEV | 12/08/23 19:36 | 2.92 | 100 | DL30806 |
| **Lead** | **52.6** (3.82) | | 6010C | | 1 | CEV | 12/08/23 19:36 | 2.92 | 100 | DL30806 |
| Mercury | ND (0.032) | | 7471B | | 1 | AFV | 12/08/23 15:44 | 0.68 | 40 | DL30807 |
| **Nickel** | **4.81** (1.91) | | 6010C | | 1 | CEV | 12/08/23 19:36 | 2.92 | 100 | DL30806 |
| Selenium | ND (3.82) | | 6010C | | 1 | CEV | 12/08/23 19:36 | 2.92 | 100 | DL30806 |
| Silver | ND (0.38) | | 6010C | | 1 | CEV | 12/08/23 19:36 | 2.92 | 100 | DL30806 |
| Thallium | ND (3.82) | | 6010C | | 1 | CEV | 12/08/23 19:36 | 2.92 | 100 | DL30806 |
| **Vanadium** | **9.95** (0.76) | | 6010C | | 1 | CEV | 12/08/23 19:36 | 2.92 | 100 | DL30806 |
| **Zinc** | **36.9** (1.91) | | 6010C | | 1 | CEV | 12/08/23 19:36 | 2.92 | 100 | DL30806 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-2 0-4
Date Sampled: 12/06/23 09:00
Percent Solids: 90
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/8/23 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 12/11/23 15:55 | | DL30801 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 12/11/23 15:55 | | DL30801 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 12/11/23 15:55 | | DL30801 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 12/11/23 15:55 | | DL30801 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 12/11/23 15:55 | | DL30801 |
| **Aroclor 1254 [2C]** | **0.06** (0.06) | | 8082A | | 1 | 12/11/23 15:55 | | DL30801 |
| Aroclor 1260 [2C] | ND (0.06) | | 8082A | | 1 | 12/11/23 15:55 | | DL30801 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 12/11/23 15:55 | | DL30801 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 12/11/23 15:55 | | DL30801 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-2 0-4
Date Sampled: 12/06/23 09:00
Percent Solids: 90
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 1,2,4-Trichlorobenzene | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 1,2-Dichlorobenzene | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 1,3-Dichlorobenzene | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 1,4-Dichlorobenzene | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 2,4,5-Trichlorophenol | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 2,4,6-Trichlorophenol | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 2,4-Dichlorophenol | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 2,4-Dimethylphenol | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 2,4-Dinitrophenol | ND (1.09) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 2,4-Dinitrotoluene | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 2,6-Dinitrotoluene | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 2-Chloronaphthalene | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 2-Chlorophenol | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 2-Methylnaphthalene | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 2-Methylphenol | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 2-Nitrophenol | ND (0.544) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 3,3´-Dichlorobenzidine | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 3+4-Methylphenol | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 4-Bromophenyl-phenylether | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 4-Chloroaniline | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| 4-Nitrophenol | ND (1.09) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Acenaphthene | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Acenaphthylene | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Acetophenone | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Aniline | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| **Anthracene** | **0.339** (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Azobenzene | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| **Benzo(a)anthracene** | **0.691** (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| **Benzo(a)pyrene** | **0.595** (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| **Benzo(b)fluoranthene** | **0.545** (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| **Benzo(g,h,i)perylene** | **0.337** (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-2 0-4
Date Sampled: 12/06/23 09:00
Percent Solids: 90
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Benzo(k)fluoranthene** | **0.443** (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| bis(2-Chloroethoxy)methane | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| bis(2-Chloroethyl)ether | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| bis(2-chloroisopropyl)Ether | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| bis(2-Ethylhexyl)phthalate | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Butylbenzylphthalate | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| **Chrysene** | **0.633** (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Dibenzo(a,h)Anthracene | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Dibenzofuran | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Diethylphthalate | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Dimethylphthalate | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Di-n-butylphthalate | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Di-n-octylphthalate | ND (0.544) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| **Fluoranthene** | **1.38** (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Fluorene | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Hexachlorobenzene | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Hexachlorobutadiene | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Hexachloroethane | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| **Indeno(1,2,3-cd)Pyrene** | **0.367** (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Isophorone | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Naphthalene | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Nitrobenzene | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| N-Nitrosodimethylamine | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Pentachlorophenol | ND (1.09) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| **Phenanthrene** | **1.27** (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| Phenol | ND (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |
| **Pyrene** | **1.26** (0.272) | | 8270D | | 1 | 12/12/23 0:28 | D3L0205 | DL30804 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *84 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *91 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *94 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-5-2 0-4
Date Sampled: 12/06/23 09:00
Percent Solids: 90
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *88 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *91 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *87 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *95 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *101 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-2 0-4
Date Sampled: 12/06/23 11:00
Percent Solids: 90

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-10
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (3.85) | | 6010C | | 1 | CEV | 12/08/23 19:38 | 2.88 | 100 | DL30806 |
| Arsenic | ND (1.92) | | 6010C | | 1 | CEV | 12/08/23 19:38 | 2.88 | 100 | DL30806 |
| **Barium** | **15.9** (1.92) | | 6010C | | 1 | CEV | 12/08/23 19:38 | 2.88 | 100 | DL30806 |
| **Beryllium** | **0.16** (0.08) | | 6010C | | 1 | CEV | 12/08/23 19:38 | 2.88 | 100 | DL30806 |
| Cadmium | ND (0.38) | | 6010C | | 1 | CEV | 12/08/23 19:38 | 2.88 | 100 | DL30806 |
| **Chromium** | **8.49** (0.77) | | 6010C | | 1 | CEV | 12/08/23 19:38 | 2.88 | 100 | DL30806 |
| **Lead** | **30.9** (3.85) | | 6010C | | 1 | CEV | 12/08/23 19:38 | 2.88 | 100 | DL30806 |
| **Mercury** | **0.110** (0.034) | | 7471B | | 1 | AFV | 12/08/23 15:46 | 0.64 | 40 | DL30807 |
| **Nickel** | **5.04** (1.92) | | 6010C | | 1 | CEV | 12/08/23 19:38 | 2.88 | 100 | DL30806 |
| Selenium | ND (3.85) | | 6010C | | 1 | CEV | 12/08/23 19:38 | 2.88 | 100 | DL30806 |
| Silver | ND (0.38) | | 6010C | | 1 | CEV | 12/08/23 19:38 | 2.88 | 100 | DL30806 |
| Thallium | ND (3.85) | | 6010C | | 1 | CEV | 12/08/23 19:38 | 2.88 | 100 | DL30806 |
| **Vanadium** | **9.47** (0.77) | | 6010C | | 1 | CEV | 12/08/23 19:38 | 2.88 | 100 | DL30806 |
| **Zinc** | **24.4** (1.92) | | 6010C | | 1 | CEV | 12/08/23 19:38 | 2.88 | 100 | DL30806 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-2 0-4
Date Sampled: 12/06/23 11:00
Percent Solids: 90
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/8/23 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 12/11/23 16:15 | | DL30801 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 12/11/23 16:15 | | DL30801 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 12/11/23 16:15 | | DL30801 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 12/11/23 16:15 | | DL30801 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 12/11/23 16:15 | | DL30801 |
| **Aroclor 1254** | **0.09** (0.06) | | 8082A | | 1 | 12/11/23 16:15 | | DL30801 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 12/11/23 16:15 | | DL30801 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 12/11/23 16:15 | | DL30801 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 12/11/23 16:15 | | DL30801 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-2 0-4
Date Sampled: 12/06/23 11:00
Percent Solids: 90
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 1,2,4-Trichlorobenzene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 1,2-Dichlorobenzene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 1,3-Dichlorobenzene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 1,4-Dichlorobenzene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 2,4,5-Trichlorophenol | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 2,4,6-Trichlorophenol | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 2,4-Dichlorophenol | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 2,4-Dimethylphenol | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 2,4-Dinitrophenol | ND (1.11) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 2,4-Dinitrotoluene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 2,6-Dinitrotoluene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 2-Chloronaphthalene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 2-Chlorophenol | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 2-Methylnaphthalene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 2-Methylphenol | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 2-Nitrophenol | ND (0.557) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 3,3´-Dichlorobenzidine | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 3+4-Methylphenol | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 4-Bromophenyl-phenylether | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 4-Chloroaniline | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| 4-Nitrophenol | ND (1.11) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Acenaphthene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Acenaphthylene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Acetophenone | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Aniline | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Anthracene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Azobenzene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Benzo(a)anthracene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Benzo(a)pyrene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Benzo(b)fluoranthene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Benzo(g,h,i)perylene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-2 0-4
Date Sampled: 12/06/23 11:00
Percent Solids: 90
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| bis(2-Chloroethoxy)methane | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| bis(2-Chloroethyl)ether | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| bis(2-chloroisopropyl)Ether | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| bis(2-Ethylhexyl)phthalate | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Butylbenzylphthalate | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Chrysene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Dibenzo(a,h)Anthracene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Dibenzofuran | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Diethylphthalate | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Dimethylphthalate | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Di-n-butylphthalate | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Di-n-octylphthalate | ND (0.557) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Fluoranthene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Fluorene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Hexachlorobenzene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Hexachlorobutadiene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Hexachloroethane | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Indeno(1,2,3-cd)Pyrene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Isophorone | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Naphthalene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Nitrobenzene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| N-Nitrosodimethylamine | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Pentachlorophenol | ND (1.11) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Phenanthrene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Phenol | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |
| Pyrene | ND (0.278) | | 8270D | | 1 | 12/12/23 0:59 | D3L0205 | DL30804 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *83 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *96 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *89 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-2 0-4
Date Sampled: 12/06/23 11:00
Percent Solids: 90
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *83 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *89 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *85 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *91 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *99 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-2 0.3-4
Date Sampled: 12/06/23 13:20
Percent Solids: 95

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-11
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.02) | | 6010C | | 1 | CEV | 12/08/23 19:40 | 2.63 | 100 | DL30806 |
| Arsenic | ND (2.01) | | 6010C | | 1 | CEV | 12/08/23 19:40 | 2.63 | 100 | DL30806 |
| **Barium** | **9.51** (2.01) | | 6010C | | 1 | CEV | 12/08/23 19:40 | 2.63 | 100 | DL30806 |
| **Beryllium** | **0.29** (0.09) | | 6010C | | 1 | CEV | 12/08/23 19:40 | 2.63 | 100 | DL30806 |
| Cadmium | ND (0.40) | | 6010C | | 1 | CEV | 12/08/23 19:40 | 2.63 | 100 | DL30806 |
| **Chromium** | **6.65** (0.80) | | 6010C | | 1 | CEV | 12/08/23 19:40 | 2.63 | 100 | DL30806 |
| **Lead** | **8.60** (4.02) | | 6010C | | 1 | CEV | 12/08/23 19:40 | 2.63 | 100 | DL30806 |
| **Mercury** | **0.047** (0.032) | | 7471B | | 1 | AFV | 12/08/23 15:48 | 0.65 | 40 | DL30807 |
| **Nickel** | **4.59** (2.01) | | 6010C | | 1 | CEV | 12/08/23 19:40 | 2.63 | 100 | DL30806 |
| Selenium | ND (4.02) | | 6010C | | 1 | CEV | 12/08/23 19:40 | 2.63 | 100 | DL30806 |
| Silver | ND (0.40) | | 6010C | | 1 | CEV | 12/08/23 19:40 | 2.63 | 100 | DL30806 |
| Thallium | ND (4.02) | | 6010C | | 1 | CEV | 12/08/23 19:40 | 2.63 | 100 | DL30806 |
| **Vanadium** | **7.40** (0.80) | | 6010C | | 1 | CEV | 12/08/23 19:40 | 2.63 | 100 | DL30806 |
| **Zinc** | **18.0** (2.01) | | 6010C | | 1 | CEV | 12/08/23 19:40 | 2.63 | 100 | DL30806 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-2 0.3-4
Date Sampled: 12/06/23 13:20
Percent Solids: 95
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/8/23 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 12/11/23 16:34 | | DL30801 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 12/11/23 16:34 | | DL30801 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 12/11/23 16:34 | | DL30801 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 12/11/23 16:34 | | DL30801 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 12/11/23 16:34 | | DL30801 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 12/11/23 16:34 | | DL30801 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 12/11/23 16:34 | | DL30801 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 12/11/23 16:34 | | DL30801 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 12/11/23 16:34 | | DL30801 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-2 0.3-4
Date Sampled: 12/06/23 13:20
Percent Solids: 95
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 1,2,4-Trichlorobenzene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 1,2-Dichlorobenzene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 1,3-Dichlorobenzene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 1,4-Dichlorobenzene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 2,4,5-Trichlorophenol | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 2,4,6-Trichlorophenol | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 2,4-Dichlorophenol | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 2,4-Dimethylphenol | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 2,4-Dinitrophenol | ND (1.07) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 2,4-Dinitrotoluene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 2,6-Dinitrotoluene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 2-Chloronaphthalene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 2-Chlorophenol | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 2-Methylnaphthalene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 2-Methylphenol | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 2-Nitrophenol | ND (0.536) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 3,3´-Dichlorobenzidine | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 3+4-Methylphenol | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 4-Bromophenyl-phenylether | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 4-Chloroaniline | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| 4-Nitrophenol | ND (1.07) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Acenaphthene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Acenaphthylene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Acetophenone | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Aniline | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Anthracene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Azobenzene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Benzo(a)anthracene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Benzo(a)pyrene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Benzo(b)fluoranthene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Benzo(g,h,i)perylene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-2 0.3-4
Date Sampled: 12/06/23 13:20
Percent Solids: 95
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| bis(2-Chloroethoxy)methane | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| bis(2-Chloroethyl)ether | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| bis(2-chloroisopropyl)Ether | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| bis(2-Ethylhexyl)phthalate | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Butylbenzylphthalate | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Chrysene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Dibenzo(a,h)Anthracene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Dibenzofuran | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Diethylphthalate | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Dimethylphthalate | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Di-n-butylphthalate | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Di-n-octylphthalate | ND (0.536) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Fluoranthene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Fluorene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Hexachlorobenzene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Hexachlorobutadiene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Hexachloroethane | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Indeno(1,2,3-cd)Pyrene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Isophorone | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Naphthalene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Nitrobenzene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| N-Nitrosodimethylamine | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Pentachlorophenol | ND (1.07) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Phenanthrene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Phenol | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |
| Pyrene | ND (0.268) | | 8270D | | 1 | 12/12/23 1:30 | D3L0205 | DL30804 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *73 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *97 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *79 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-3-2 0.3-4
Date Sampled: 12/06/23 13:20
Percent Solids: 95
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *76 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *80 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *78 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *79 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *94 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-2 0-4
Date Sampled: 12/06/23 07:30
Percent Solids: 94

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-12
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND (4.03) | | 6010C | | 1 | CEV | 12/08/23 19:43 | 2.65 | 100 | DL30806 |
| Arsenic | ND (2.02) | | 6010C | | 1 | CEV | 12/08/23 19:43 | 2.65 | 100 | DL30806 |
| **Barium** | **18.1** (2.02) | | 6010C | | 1 | CEV | 12/08/23 19:43 | 2.65 | 100 | DL30806 |
| **Beryllium** | **0.22** (0.09) | | 6010C | | 1 | CEV | 12/08/23 19:43 | 2.65 | 100 | DL30806 |
| Cadmium | ND (0.40) | | 6010C | | 1 | CEV | 12/08/23 19:43 | 2.65 | 100 | DL30806 |
| **Chromium** | **7.15** (0.81) | | 6010C | | 1 | CEV | 12/08/23 19:43 | 2.65 | 100 | DL30806 |
| **Lead** | **32.0** (4.03) | | 6010C | | 1 | CEV | 12/08/23 19:43 | 2.65 | 100 | DL30806 |
| **Mercury** | **0.051** (0.034) | | 7471B | | 1 | AFV | 12/08/23 15:55 | 0.63 | 40 | DL30807 |
| **Nickel** | **5.44** (2.02) | | 6010C | | 1 | CEV | 12/08/23 19:43 | 2.65 | 100 | DL30806 |
| Selenium | ND (4.03) | | 6010C | | 1 | CEV | 12/08/23 19:43 | 2.65 | 100 | DL30806 |
| Silver | ND (0.40) | | 6010C | | 1 | CEV | 12/08/23 19:43 | 2.65 | 100 | DL30806 |
| Thallium | ND (4.03) | | 6010C | | 1 | CEV | 12/08/23 19:43 | 2.65 | 100 | DL30806 |
| **Vanadium** | **9.97** (0.81) | | 6010C | | 1 | CEV | 12/08/23 19:43 | 2.65 | 100 | DL30806 |
| **Zinc** | **26.2** (2.02) | | 6010C | | 1 | CEV | 12/08/23 19:43 | 2.65 | 100 | DL30806 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-2 0-4
Date Sampled: 12/06/23 07:30
Percent Solids: 94
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/8/23 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 12/11/23 16:59 | | DL30801 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 12/11/23 16:59 | | DL30801 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 12/11/23 16:59 | | DL30801 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 12/11/23 16:59 | | DL30801 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 12/11/23 16:59 | | DL30801 |
| **Aroclor 1254** | **0.1** (0.05) | | 8082A | | 1 | 12/11/23 16:59 | | DL30801 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 12/11/23 16:59 | | DL30801 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 12/11/23 16:59 | | DL30801 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 12/11/23 16:59 | | DL30801 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *57 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-2 0-4
Date Sampled: 12/06/23 07:30
Percent Solids: 94
Initial Volume: 20.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 1,2,4-Trichlorobenzene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 1,2-Dichlorobenzene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 1,3-Dichlorobenzene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 1,4-Dichlorobenzene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 2,4,5-Trichlorophenol | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 2,4,6-Trichlorophenol | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 2,4-Dichlorophenol | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 2,4-Dimethylphenol | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 2,4-Dinitrophenol | ND (1.03) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 2,4-Dinitrotoluene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 2,6-Dinitrotoluene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 2-Chloronaphthalene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 2-Chlorophenol | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 2-Methylnaphthalene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 2-Methylphenol | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 2-Nitrophenol | ND (0.514) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 3,3´-Dichlorobenzidine | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 3+4-Methylphenol | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 4-Bromophenyl-phenylether | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 4-Chloroaniline | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| 4-Nitrophenol | ND (1.03) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Acenaphthene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Acenaphthylene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Acetophenone | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Aniline | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Anthracene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Azobenzene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Benzo(a)anthracene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Benzo(a)pyrene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Benzo(b)fluoranthene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Benzo(g,h,i)perylene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-2 0-4
Date Sampled: 12/06/23 07:30
Percent Solids: 94
Initial Volume: 20.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| bis(2-Chloroethoxy)methane | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| bis(2-Chloroethyl)ether | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| bis(2-chloroisopropyl)Ether | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| bis(2-Ethylhexyl)phthalate | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Butylbenzylphthalate | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Chrysene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Dibenzo(a,h)Anthracene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Dibenzofuran | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Diethylphthalate | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Dimethylphthalate | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Di-n-butylphthalate | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Di-n-octylphthalate | ND (0.514) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Fluoranthene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Fluorene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Hexachlorobenzene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Hexachlorobutadiene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Hexachloroethane | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Indeno(1,2,3-cd)Pyrene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Isophorone | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Naphthalene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Nitrobenzene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| N-Nitrosodimethylamine | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Pentachlorophenol | ND (1.03) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Phenanthrene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Phenol | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |
| Pyrene | ND (0.257) | | 8270D | | 1 | 12/12/23 2:01 | D3L0205 | DL30804 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *81 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *92 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *85 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-2-2 0-4
Date Sampled: 12/06/23 07:30
Percent Solids: 94
Initial Volume: 20.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23L0197
ESS Laboratory Sample ID: 23L0197-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/8/23 8:05

## 8270D Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2-Fluorobiphenyl* | | *80 %* | | *30-130* | | | | |
| *Surrogate: 2-Fluorophenol* | | *87 %* | | *30-130* | | | | |
| *Surrogate: Nitrobenzene-d5* | | *80 %* | | *30-130* | | | | |
| *Surrogate: Phenol-d6* | | *87 %* | | *30-130* | | | | |
| *Surrogate: p-Terphenyl-d14* | | *93 %* | | *30-130* | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0197

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DL30806 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Antimony | ND | 5.00 | mg/kg wet | | | | | | | |
| Arsenic | ND | 2.50 | mg/kg wet | | | | | | | |
| Barium | ND | 2.50 | mg/kg wet | | | | | | | |
| Beryllium | ND | 0.11 | mg/kg wet | | | | | | | |
| Cadmium | ND | 0.50 | mg/kg wet | | | | | | | |
| Chromium | ND | 1.00 | mg/kg wet | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| Nickel | ND | 2.50 | mg/kg wet | | | | | | | |
| Selenium | ND | 5.00 | mg/kg wet | | | | | | | |
| Silver | ND | 0.50 | mg/kg wet | | | | | | | |
| Thallium | ND | 5.00 | mg/kg wet | | | | | | | |
| Vanadium | ND | 1.00 | mg/kg wet | | | | | | | |
| Zinc | ND | 2.50 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Antimony | 63.0 | 16.7 | mg/kg wet | 54.20 | | 116 | 80-120 | | | |
| Arsenic | 253 | 8.33 | mg/kg wet | 258.0 | | 98 | 80-120 | | | |
| Barium | 773 | 8.33 | mg/kg wet | 809.0 | | 96 | 80-120 | | | |
| Beryllium | 47.6 | 0.37 | mg/kg wet | 48.50 | | 98 | 80-120 | | | |
| Cadmium | 298 | 1.67 | mg/kg wet | 321.0 | | 93 | 80-120 | | | |
| Chromium | 125 | 3.33 | mg/kg wet | 133.0 | | 94 | 80-120 | | | |
| Lead | 99.3 | 16.7 | mg/kg wet | 102.0 | | 97 | 80-120 | | | |
| Nickel | 139 | 8.33 | mg/kg wet | 137.0 | | 102 | 80-120 | | | |
| Selenium | 51.1 | 16.7 | mg/kg wet | 49.40 | | 103 | 80-120 | | | |
| Silver | 23.4 | 1.67 | mg/kg wet | 22.70 | | 103 | 80-120 | | | |
| Thallium | 83.2 | 16.7 | mg/kg wet | 81.40 | | 102 | 80-120 | | | |
| Vanadium | 110 | 3.33 | mg/kg wet | 108.0 | | 101 | 80-120 | | | |
| Zinc | 520 | 8.33 | mg/kg wet | 540.0 | | 96 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Antimony | 58.5 | 14.9 | mg/kg wet | 54.20 | | 108 | 80-120 | 7 | 30 | |
| Arsenic | 224 | 7.46 | mg/kg wet | 258.0 | | 87 | 80-120 | 12 | 30 | |
| Barium | 671 | 7.46 | mg/kg wet | 809.0 | | 83 | 80-120 | 14 | 30 | |
| Beryllium | 41.5 | 0.33 | mg/kg wet | 48.50 | | 86 | 80-120 | 14 | 20 | |
| Cadmium | 252 | 1.49 | mg/kg wet | 321.0 | | 79 | 80-120 | 17 | 30 | B- |
| Chromium | 113 | 2.99 | mg/kg wet | 133.0 | | 85 | 80-120 | 10 | 30 | |
| Lead | 86.1 | 14.9 | mg/kg wet | 102.0 | | 84 | 80-120 | 14 | 20 | |
| Nickel | 122 | 7.46 | mg/kg wet | 137.0 | | 89 | 80-120 | 13 | 30 | |
| Selenium | 44.7 | 14.9 | mg/kg wet | 49.40 | | 90 | 80-120 | 13 | 30 | |
| Silver | 19.9 | 1.49 | mg/kg wet | 22.70 | | 88 | 80-120 | 16 | 30 | |
| Thallium | 70.7 | 14.9 | mg/kg wet | 81.40 | | 87 | 80-120 | 16 | 30 | |
| Vanadium | 93.4 | 2.99 | mg/kg wet | 108.0 | | 86 | 80-120 | 16 | 30 | |
| Zinc | 445 | 7.46 | mg/kg wet | 540.0 | | 82 | 80-120 | 16 | 30 | |
| **Batch DL30807 - 7471B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0197

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DL30807 - 7471B** | | | | | | | | | | |
| Mercury | ND | 0.033 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Mercury | 11.2 | 3.19 | mg/kg wet | 17.10 | | 66 | 33.1-86.55 | | | |
| **LCS Dup** | | | | | | | | | | |
| Mercury | 11.6 | 3.14 | mg/kg wet | 17.10 | | 68 | 33.1-86.55 | 3 | 30 | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DL30801 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 87 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 86 | 40-140 | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | 2 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 85 | 40-140 | 3 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | 2 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | 3 | 30 | |
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DL30804 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0197

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8270D Semi-Volatile Organic Compounds | | | | | | | | | | |
| **Batch DL30804 - 3546** | | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0197

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DL30804 - 3546** | | | | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyridine | ND | 0.250 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 1.99 | 0.025 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 1.97 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| 1,2-Dichlorobenzene | 2.01 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| 1,3-Dichlorobenzene | 1.97 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.01 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 30-130 | | | |
| 2,4-Dichlorophenol | 2.01 | 0.250 | mg/kg wet | 2.500 | | 81 | 30-130 | | | |
| 2,4-Dimethylphenol | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 30-130 | | | |
| 2,4-Dinitrophenol | 2.40 | 1.00 | mg/kg wet | 2.500 | | 96 | 30-130 | | | |
| 2,4-Dinitrotoluene | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| 2-Chloronaphthalene | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| 2-Chlorophenol | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 30-130 | | | |
| 2-Methylnaphthalene | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| 2-Methylphenol | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 30-130 | | | |
| 2-Nitrophenol | 1.89 | 0.500 | mg/kg wet | 2.500 | | 76 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| 3+4-Methylphenol | 4.25 | 0.250 | mg/kg wet | 5.000 | | 85 | 30-130 | | | |
| 4-Bromophenyl-phenylether | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| 4-Chloroaniline | 1.70 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | | | |
| 4-Nitrophenol | 1.87 | 1.00 | mg/kg wet | 2.500 | | 75 | 30-130 | | | |
| Acenaphthene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Acenaphthylene | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Acetophenone | 1.81 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | | | |
| Aniline | 1.43 | 0.250 | mg/kg wet | 2.500 | | 57 | 40-140 | | | |
| Anthracene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Azobenzene | 1.69 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | | | |
| Benzo(a)anthracene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Benzo(a)pyrene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0197

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DL30804 - 3546** | | | | | | | | | | |
| bis(2-Chloroethoxy)methane | 1.55 | 0.250 | mg/kg wet | 2.500 | | 62 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 1.67 | 0.250 | mg/kg wet | 2.500 | | 67 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.34 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Butylbenzylphthalate | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Chrysene | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.51 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Dibenzofuran | 2.14 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Diethylphthalate | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Dimethylphthalate | 2.36 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Di-n-butylphthalate | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Di-n-octylphthalate | 2.14 | 0.500 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Fluoranthene | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Fluorene | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Hexachlorobenzene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Hexachlorobutadiene | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Hexachloroethane | 1.91 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| Isophorone | 1.61 | 0.250 | mg/kg wet | 2.500 | | 64 | 40-140 | | | |
| Naphthalene | 1.81 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | | | |
| Nitrobenzene | 1.67 | 0.250 | mg/kg wet | 2.500 | | 67 | 40-140 | | | |
| N-Nitrosodimethylamine | 1.87 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| Pentachlorophenol | 2.36 | 1.00 | mg/kg wet | 2.500 | | 94 | 30-130 | | | |
| Phenanthrene | 2.19 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Phenol | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 30-130 | | | |
| Pyrene | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Pyridine | 1.60 | 0.250 | mg/kg wet | 2.500 | | 64 | 40-140 | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.11 | 0.025 | mg/kg wet | 2.500 | | 84 | 40-140 | 6 | 30 | |
| 1,2,4-Trichlorobenzene | 2.06 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 4 | 30 | |
| 1,2-Dichlorobenzene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 4 | 30 | |
| 1,3-Dichlorobenzene | 2.06 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 5 | 30 | |
| 1,4-Dichlorobenzene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 4 | 30 | |
| 2,4,5-Trichlorophenol | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 30-130 | 4 | 30 | |
| 2,4,6-Trichlorophenol | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 30-130 | 1 | 30 | |
| 2,4-Dichlorophenol | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 30-130 | 2 | 30 | |
| 2,4-Dimethylphenol | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 30-130 | 4 | 30 | |
| 2,4-Dinitrophenol | 2.40 | 1.00 | mg/kg wet | 2.500 | | 96 | 30-130 | 0.03 | 30 | |
| 2,4-Dinitrotoluene | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 3 | 30 | |
| 2,6-Dinitrotoluene | 2.57 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 3 | 30 | |
| 2-Chloronaphthalene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | 7 | 30 | |
| 2-Chlorophenol | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 30-130 | 4 | 30 | |
| 2-Methylnaphthalene | 1.96 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | 3 | 30 | |
| 2-Methylphenol | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 30-130 | 7 | 30 | |
| 2-Nitrophenol | 2.00 | 0.500 | mg/kg wet | 2.500 | | 80 | 30-130 | 5 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0197

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8270D Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DL30804 - 3546** | | | | | | | | | | |
| 3,3´-Dichlorobenzidine | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | 2 | 30 | |
| 3+4-Methylphenol | 4.33 | 0.250 | mg/kg wet | 5.000 | | 87 | 30-130 | 2 | 30 | |
| 4-Bromophenyl-phenylether | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 5 | 30 | |
| 4-Chloroaniline | 1.77 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | 4 | 30 | |
| 4-Nitrophenol | 1.81 | 1.00 | mg/kg wet | 2.500 | | 72 | 30-130 | 3 | 30 | |
| Acenaphthene | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 4 | 30 | |
| Acenaphthylene | 2.16 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 5 | 30 | |
| Acetophenone | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | 5 | 30 | |
| Aniline | 1.55 | 0.250 | mg/kg wet | 2.500 | | 62 | 40-140 | 8 | 30 | |
| Anthracene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 2 | 30 | |
| Azobenzene | 1.74 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | 3 | 30 | |
| Benzo(a)anthracene | 2.51 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 3 | 30 | |
| Benzo(a)pyrene | 2.60 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | 3 | 30 | |
| Benzo(b)fluoranthene | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 0.9 | 30 | |
| Benzo(g,h,i)perylene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 6 | 30 | |
| Benzo(k)fluoranthene | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 0.7 | 30 | |
| bis(2-Chloroethoxy)methane | 1.63 | 0.250 | mg/kg wet | 2.500 | | 65 | 40-140 | 4 | 30 | |
| bis(2-Chloroethyl)ether | 1.71 | 0.250 | mg/kg wet | 2.500 | | 69 | 40-140 | 3 | 30 | |
| bis(2-chloroisopropyl)Ether | 1.91 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | 7 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 3 | 30 | |
| Butylbenzylphthalate | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 4 | 30 | |
| Chrysene | 2.55 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 4 | 30 | |
| Dibenzo(a,h)Anthracene | 2.64 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 5 | 30 | |
| Dibenzofuran | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 3 | 30 | |
| Diethylphthalate | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 3 | 30 | |
| Dimethylphthalate | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 4 | 30 | |
| Di-n-butylphthalate | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 0.7 | 30 | |
| Di-n-octylphthalate | 2.16 | 0.500 | mg/kg wet | 2.500 | | 86 | 40-140 | 0.9 | 30 | |
| Fluoranthene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 1 | 30 | |
| Fluorene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 4 | 30 | |
| Hexachlorobenzene | 2.58 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 4 | 30 | |
| Hexachlorobutadiene | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | 7 | 30 | |
| Hexachloroethane | 1.99 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | 4 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.61 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 3 | 30 | |
| Isophorone | 1.65 | 0.250 | mg/kg wet | 2.500 | | 66 | 40-140 | 3 | 30 | |
| Naphthalene | 1.85 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | 2 | 30 | |
| Nitrobenzene | 1.70 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | 2 | 30 | |
| N-Nitrosodimethylamine | 1.88 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | 0.5 | 30 | |
| Pentachlorophenol | 2.34 | 1.00 | mg/kg wet | 2.500 | | 93 | 30-130 | 0.9 | 30 | |
| Phenanthrene | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 2 | 30 | |
| Phenol | 1.85 | 0.250 | mg/kg wet | 2.500 | | 74 | 30-130 | 4 | 30 | |
| Pyrene | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 4 | 30 | |
| Pyridine | 1.71 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | 7 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23L0197

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| SD | Surrogate recovery(ies) diluted below the MRL (SD). |
| Q | Calibration required quadratic regression (Q). |
| D | Diluted. |
| CD+ | Continuing Calibration %Diff/Drift is above control limit (CD+). |
| B- | Blank Spike recovery is below lower control limit (B-). |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0197

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 23L0197
Date Received: 12/7/2023
Project Due Date: 12/14/2023
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.9 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 501057 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 501069 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 501059 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 501060 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 501070 | Yes | N/A | Yes | 8 oz jar | NP | |
| 5 | 501061 | Yes | N/A | Yes | 8 oz jar | NP | |
| 5 | 501071 | Yes | N/A | Yes | 8 oz jar | NP | |
| 6 | 501062 | Yes | N/A | Yes | 8 oz jar | NP | |
| 7 | 501063 | Yes | N/A | Yes | 8 oz jar | NP | |
| 7 | 501072 | Yes | N/A | Yes | 8 oz jar | NP | |
| 8 | 501064 | Yes | N/A | Yes | 8 oz jar | NP | |
| 8 | 501315 | Yes | N/A | Yes | 8 oz jar | NP | |
| 9 | 501065 | Yes | N/A | Yes | 8 oz jar | NP | |
| 9 | 501073 | Yes | N/A | Yes | 8 oz jar | NP | |
| 10 | 501066 | Yes | N/A | Yes | 8 oz jar | NP | |
| 10 | 501074 | Yes | N/A | Yes | 8 oz jar | NP | |
| 11 | 501067 | Yes | N/A | Yes | 8 oz jar | NP | |

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 23L0197
Date Received: 12/7/2023

| | | | | | | |
|---|---|---|---|---|---|---|
| 11 | 501075 | Yes | N/A | Yes | 8 oz jar | NP |
| 12 | 501076 | Yes | N/A | Yes | 8 oz jar | NP |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials TD

Are barcode labels on correct containers? Yes / No

Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA

Are all Hex Chrome stickers attached? Yes / No / NA

Are all QC stickers attached? Yes / No / NA

Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Taylor Davis Date & Time: 12/7/23 1743

Reviewed By: Date & Time: 12/7/23 1838

# CHAIN OF CUSTODY

ESS Lab # 236197 | Page 1 of 2

ESS LABORATORY
185 Frances Avenue
Cranston, RI 02910
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

Turn Time (Days): ☐ >5 ☑ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day
Regulatory State: MA Criteria: S-1/GW-1/2/3
Is this project for any of the following?: ☑ CT RCP ☑ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

**ELECTRONIC DELIVERABLES (Final Reports are PDF)**
☑ Limit Checker ☐ State Forms ☐ EQuIS
☑ Excel ☐ State Upload ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

## CLIENT INFORMATION

Client: Civil + Environmental Consultants
Address: 31 Bellows Rd
Raynham, MA 02767
Phone: 774-501-2176
Email: cdalbello@cecinc.com
Distribution List: kitchen@cecinc.com, dbarboza@cecinc.com

## PROJECT INFORMATION

Project Name: Mass CEC
Project Location: 18 Wright St. - New Bedford
Project Number: 332-344
Project Manager: Cassia Dal Bello
Bill to: Client
PO#:
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

## REQUESTED ANALYSES

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCBs | SVOCs | MCP 14 metals | EPH w/ target PAHs | VOCs | Total Number of Bottles |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12-5-23 | 12:50 | Comp | Soil | CEC-7-2(8-10) | X | | | | | |
| 2 | 12-5-23 | 14:00 | | | CEC-8-2(2-4) | X | X | X | | | |
| 3 | " | 14:15 | | | CEC-8-2(4-8) | X | | | | | |
| 4 | " | 09:00 | | | CEC-1-2(0-4) | X | X | X | | | |
| 5 | " | 11:00 | | | CEC-4-2(0-4) | X | X | X | | | |
| 6 | " | 11:15 | | | CEC-4-2(4-5.75) | X | | | | | |
| 7 | " | 12:30 | | | CEC-7-2(0-4) | X | X | X | | | |
| 8 | " | 12:40 | | | CEC-7-2(4-8) | X | | | | | |
| 9 | 12-6-23 | 0900 | | | CEC-5-2(0-4) | X | X | X | | | |
| 10 | " | 11:00 | | | CEC-6-2(0-4) | X | X | X | | | |
| Container Type: | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | | | | | J | J | J | V | V | |
| Container Volume: | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | | | | | 10 | 10 | 10 | 7 | 7 | |
| Preservation Code: | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | | | | | 1 | 1 | 1 | 6 | 6 | |
| Number of Bottles per Sample: | | | | | | 1 | 1 | 1 | 2 | 2 | |

Sampled by: Dave Barboza (DGB)

**Chain needs to be filled out neatly and completely for on time delivery.**

**Laboratory Use Only**
Cooler Temperature (°C): 4.0 / 1.0

Comments: * Please specify "Other" preservative and containers types in this space
#1-2 jars per sample

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

**Dissolved Filtration**
☐ Lab Filter

| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
|---|---|---|---|---|---|---|---|
| [signature] | 12-6-23 | 18:00 | Secured Fridge | [signature] | 12/7/23 | 12:25 | [signature] 12/7/23 |
| [signature] | 12/7/23 | 17:09 | [signature] | | | | |

185 Frances Avenue
Cranston, RI 02910
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 230197 | Page 2 of 2

Turn Time (Days) ☐>5 ☑5 ☐4 ☐3 ☐2 ☐1 ☐ Same Day

Regulatory State: MA Criteria: S-1/GW-1/2/3

Is this project for any of the following?:
☑ CT RCP ☑ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

**ELECTRONIC DELIVERABLES (Final Reports are PDF)**
☑ Limit Checker ☐ State Forms ☐ EQuIS
☑ Excel ☐ State Upload ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

## CLIENT INFORMATION

Client: Civil + Environmental Consultants
Address: 31 Bellows Rd
Raynham, MA 02767
Phone: 774-501-2176
Email Distribution List: cdalbello@cecinc.com; jkitchen@cecinc.com; dbarboza@cecinc.com

## PROJECT INFORMATION

Project Name: Mass CEC
Project Location: 18 Wright St. - New Bedford
Project Number: 332-344
Project Manager: Cassia Dal Bello
Bill to: Client
PO#:
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

## REQUESTED ANALYSES

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCBs | SVOCs | MCP 14 metals | EPH w/ target PAH | VOCs | HOLD | Total Number of Bottles |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 12-6-23 | 13:20 | Comp | Grab | CEC-3-2(0.3-4) | X | X | X | | | | |
| 12 | 12-6-23 | 07:30 | " | " | CEC-2-2(0-4) | X | X | X | | | | |
| — | 12-6-23 | 13:30 | " | " | CEC-3-2(12-14) # DB | | | | | | X | |

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*

| | | | | | |
|---|---|---|---|---|---|
| | J | J | J | V | V |
| | 10 | 10 | 10 | 7 | 7 |
| | 1 | 1 | 1 | 6 | 6 |
| | — | — | — | 2 | 2 |

Number of Bottles per Sample:

Sampled by: Dave Barboza (DGB)

**Chain needs to be filled out neatly and completely for on time delivery.**

**Laboratory Use Only**
Cooler Temperature (°C): 4.9 / 1.0

Comments: * Please specify "Other" preservative and containers types in this space
#1-2 jars per sample

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration ☐ Lab Filter

| Relinquished by (Signature) | Date | Time | Received by (Signature) |
|---|---|---|---|
| [signature] | 12-6-23 | 18:00 | Secured Fridge |
| [signature] | 12/7/23 | 12:25 | [signature] 12/7/23 |
| [signature] | 12/7/23 | 17:8 | [signature] |

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC - New Bedford (332-344)**
**ESS Laboratory Work Order Number: 23L0931**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 2:56 pm, Jan 08, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0931

## SAMPLE RECEIPT

The following samples were received on December 29, 2023 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 23L0931-01 | A-2 0-1 | Soil | 8082A |
| 23L0931-02 | A-2 1-2 | Soil | 8082A |
| 23L0931-03 | A-2 2-3 | Soil | 8082A |
| 23L0931-04 | AA-3 0-1 | Soil | 8082A |
| 23L0931-05 | AA-3 1-2 | Soil | 8082A |
| 23L0931-06 | AA-3 2-3 | Soil | 8082A |
| 23L0931-07 | A-4 0-1 | Soil | 8082A |
| 23L0931-08 | A-4 1-2 | Soil | 8082A |
| 23L0931-09 | A-4 2-3 | Soil | 8082A |
| 23L0931-10 | A-4 3-4 | Soil | 8082A |
| 23L0931-11 | B-3 0-1 | Soil | 8082A |
| 23L0931-12 | B-3 1-2 | Soil | 8082A |
| 23L0931-13 | J-0 0-1 | Soil | 8082A |
| 23L0931-14 | J-0 1-2 | Soil | 8082A |
| 23L0931-15 | J-0 2-3 | Soil | 8082A |
| 23L0931-16 | J-0 3-4 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23L0931

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**

| | |
|---|---|
| 23L0931-05 | **Lower value is used due to matrix interferences (LC).** |
| | Aroclor 1248 [2C] |
| 23L0931-05 | **Percent difference between primary and confirmation results exceeds 40% (P).** |
| | Aroclor 1248 [2C] |
| 23L0931-10 | **Lower value is used due to matrix interferences (LC).** |
| | Aroclor 1248 [2C] |
| 23L0931-10 | **Percent difference between primary and confirmation results exceeds 40% (P).** |
| | Aroclor 1248 [2C] |

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0931

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0931

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **23L0931-01 through 23L0931-16**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: January 08, 2024

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: A-2 0-1
Date Sampled: 12/29/23 08:50
Percent Solids: 89
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0931
ESS Laboratory Sample ID: 23L0931-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:16 | | DA40203 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:16 | | DA40203 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:16 | | DA40203 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:16 | | DA40203 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:16 | | DA40203 |
| Aroclor 1254 [2C] | ND (0.06) | | 8082A | | 1 | 01/03/24 13:16 | | DA40203 |
| Aroclor 1260 [2C] | ND (0.06) | | 8082A | | 1 | 01/03/24 13:16 | | DA40203 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:16 | | DA40203 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:16 | | DA40203 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *71 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: A-2 1-2
Date Sampled: 12/29/23 08:51
Percent Solids: 83
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0931
ESS Laboratory Sample ID: 23L0931-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:35 | | DA40203 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:35 | | DA40203 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:35 | | DA40203 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:35 | | DA40203 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:35 | | DA40203 |
| Aroclor 1254 [2C] | ND (0.06) | | 8082A | | 1 | 01/03/24 13:35 | | DA40203 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:35 | | DA40203 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:35 | | DA40203 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:35 | | DA40203 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: A-2 2-3
Date Sampled: 12/29/23 08:53
Percent Solids: 87
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0931
ESS Laboratory Sample ID: 23L0931-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:55 | | DA40203 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:55 | | DA40203 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:55 | | DA40203 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:55 | | DA40203 |
| **Aroclor 1248** | **0.3** (0.06) | | 8082A | | 1 | 01/03/24 13:55 | | DA40203 |
| **Aroclor 1254** | **0.6** (0.06) | | 8082A | | 1 | 01/03/24 13:55 | | DA40203 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:55 | | DA40203 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:55 | | DA40203 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:55 | | DA40203 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *69 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *66 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: AA-3 0-1
Date Sampled: 12/29/23 08:35
Percent Solids: 90
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0931
ESS Laboratory Sample ID: 23L0931-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:14 | | DA40203 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:14 | | DA40203 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:14 | | DA40203 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:14 | | DA40203 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:14 | | DA40203 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | | 8082A | | 1 | 01/03/24 14:14 | | DA40203 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:14 | | DA40203 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:14 | | DA40203 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:14 | | DA40203 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *77 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: AA-3 1-2
Date Sampled: 12/29/23 08:36
Percent Solids: 87
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0931
ESS Laboratory Sample ID: 23L0931-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:33 | | DA40203 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:33 | | DA40203 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:33 | | DA40203 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:33 | | DA40203 |
| **Aroclor 1248 [2C]** | **P, LC 0.1** (0.06) | | 8082A | | 1 | 01/03/24 14:33 | | DA40203 |
| **Aroclor 1254** | **0.7** (0.06) | | 8082A | | 1 | 01/03/24 14:33 | | DA40203 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:33 | | DA40203 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:33 | | DA40203 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:33 | | DA40203 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *79 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: AA-3 2-3
Date Sampled: 12/29/23 08:37
Percent Solids: 89
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0931
ESS Laboratory Sample ID: 23L0931-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:53 | | DA40203 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:53 | | DA40203 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:53 | | DA40203 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:53 | | DA40203 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:53 | | DA40203 |
| **Aroclor 1254** | **0.2** (0.06) | | 8082A | | 1 | 01/03/24 14:53 | | DA40203 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:53 | | DA40203 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:53 | | DA40203 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:53 | | DA40203 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *77 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: A-4 0-1
Date Sampled: 12/29/23 07:35
Percent Solids: 89
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0931
ESS Laboratory Sample ID: 23L0931-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 17:48 | | DA40203 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 17:48 | | DA40203 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 17:48 | | DA40203 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 17:48 | | DA40203 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 01/03/24 17:48 | | DA40203 |
| Aroclor 1254 [2C] | ND (0.06) | | 8082A | | 1 | 01/03/24 17:48 | | DA40203 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 17:48 | | DA40203 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 17:48 | | DA40203 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 17:48 | | DA40203 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *79 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: A-4 1-2
Date Sampled: 12/29/23 07:36
Percent Solids: 85
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0931
ESS Laboratory Sample ID: 23L0931-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:07 | | DA40203 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:07 | | DA40203 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:07 | | DA40203 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:07 | | DA40203 |
| Aroclor 1248 [2C] | ND (0.06) | | 8082A | | 1 | 01/03/24 18:07 | | DA40203 |
| **Aroclor 1254** | **0.5** (0.06) | | 8082A | | 1 | 01/03/24 18:07 | | DA40203 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:07 | | DA40203 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:07 | | DA40203 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:07 | | DA40203 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: A-4 2-3
Date Sampled: 12/29/23 07:37
Percent Solids: 87
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0931
ESS Laboratory Sample ID: 23L0931-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:27 | | DA40203 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:27 | | DA40203 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:27 | | DA40203 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:27 | | DA40203 |
| **Aroclor 1248** | **0.3** (0.06) | | 8082A | | 1 | 01/03/24 18:27 | | DA40203 |
| **Aroclor 1254** | **1.3** (0.1) | | 8082A | | 2 | 01/04/24 12:06 | | DA40203 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:27 | | DA40203 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:27 | | DA40203 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:27 | | DA40203 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *77 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: A-4 3-4
Date Sampled: 12/29/23 07:38
Percent Solids: 87
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0931
ESS Laboratory Sample ID: 23L0931-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:46 | | DA40203 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:46 | | DA40203 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:46 | | DA40203 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:46 | | DA40203 |
| **Aroclor 1248 [2C]** | **P, LC 0.08** (0.06) | | 8082A | | 1 | 01/03/24 18:46 | | DA40203 |
| **Aroclor 1254** | **0.6** (0.06) | | 8082A | | 1 | 01/03/24 18:46 | | DA40203 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:46 | | DA40203 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:46 | | DA40203 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 18:46 | | DA40203 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *68 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: B-3 0-1
Date Sampled: 12/29/23 08:40
Percent Solids: 91
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0931
ESS Laboratory Sample ID: 23L0931-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:05 | | DA40203 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:05 | | DA40203 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:05 | | DA40203 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:05 | | DA40203 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:05 | | DA40203 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:05 | | DA40203 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:05 | | DA40203 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:05 | | DA40203 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:05 | | DA40203 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: B-3 1-2
Date Sampled: 12/29/23 08:41
Percent Solids: 92
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0931
ESS Laboratory Sample ID: 23L0931-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:25 | | DA40203 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:25 | | DA40203 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:25 | | DA40203 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:25 | | DA40203 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:25 | | DA40203 |
| **Aroclor 1254 [2C]** | **0.09** (0.05) | | 8082A | | 1 | 01/03/24 19:25 | | DA40203 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:25 | | DA40203 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:25 | | DA40203 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:25 | | DA40203 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *89 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *90 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: J-0 0-1
Date Sampled: 12/29/23 07:25
Percent Solids: 92
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0931
ESS Laboratory Sample ID: 23L0931-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:44 | | DA40203 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:44 | | DA40203 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:44 | | DA40203 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:44 | | DA40203 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:44 | | DA40203 |
| Aroclor 1254 [2C] | ND (0.05) | | 8082A | | 1 | 01/03/24 19:44 | | DA40203 |
| Aroclor 1260 [2C] | ND (0.05) | | 8082A | | 1 | 01/03/24 19:44 | | DA40203 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:44 | | DA40203 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:44 | | DA40203 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *84 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: J-0 1-2
Date Sampled: 12/29/23 07:26
Percent Solids: 88
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0931
ESS Laboratory Sample ID: 23L0931-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:03 | | DA40203 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:03 | | DA40203 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:03 | | DA40203 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:03 | | DA40203 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:03 | | DA40203 |
| Aroclor 1254 [2C] | ND (0.06) | | 8082A | | 1 | 01/03/24 20:03 | | DA40203 |
| Aroclor 1260 [2C] | ND (0.06) | | 8082A | | 1 | 01/03/24 20:03 | | DA40203 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:03 | | DA40203 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:03 | | DA40203 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: J-0 2-3
Date Sampled: 12/29/23 07:27
Percent Solids: 90
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0931
ESS Laboratory Sample ID: 23L0931-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:23 | | DA40203 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:23 | | DA40203 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:23 | | DA40203 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:23 | | DA40203 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:23 | | DA40203 |
| **Aroclor 1254** | **0.2** (0.06) | | 8082A | | 1 | 01/03/24 20:23 | | DA40203 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:23 | | DA40203 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:23 | | DA40203 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:23 | | DA40203 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *81 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: J-0 3-4
Date Sampled: 12/29/23 07:28
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0931
ESS Laboratory Sample ID: 23L0931-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:42 | | DA40203 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:42 | | DA40203 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:42 | | DA40203 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:42 | | DA40203 |
| **Aroclor 1248** | **0.2** (0.05) | | 8082A | | 1 | 01/03/24 20:42 | | DA40203 |
| **Aroclor 1254** | **0.3** (0.05) | | 8082A | | 1 | 01/03/24 20:42 | | DA40203 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:42 | | DA40203 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:42 | | DA40203 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:42 | | DA40203 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0931

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DA40203 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 93 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 96 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 92 | 40-140 | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | 4 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | 2 | 30 | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 91 | 40-140 | 5 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | 4 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23L0931

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| P | Percent difference between primary and confirmation results exceeds 40% (P). |
| LC | Lower value is used due to matrix interferences (LC). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0931

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: Client

ESS Project ID: 23L0931
Date Received: 12/29/2023
Project Due Date: 1/8/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 3 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / (No)
    b. Does methanol cover soil completely? Yes / No / (NA)

13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / (No)
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 508119 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 508120 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 508121 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 508122 | Yes | N/A | Yes | 8 oz jar | NP | |
| 5 | 508123 | Yes | N/A | Yes | 8 oz jar | NP | |
| 6 | 508124 | Yes | N/A | Yes | 8 oz jar | NP | |
| 7 | 508125 | Yes | N/A | Yes | 8 oz jar | NP | |
| 8 | 508126 | Yes | N/A | Yes | 8 oz jar | NP | |
| 9 | 508127 | Yes | N/A | Yes | 8 oz jar | NP | |
| 10 | 508128 | Yes | N/A | Yes | 8 oz jar | NP | |
| 11 | 508129 | Yes | N/A | Yes | 8 oz jar | NP | |
| 12 | 508130 | Yes | N/A | Yes | 8 oz jar | NP | |
| 13 | 508131 | Yes | N/A | Yes | 8 oz jar | NP | |
| 14 | 508132 | Yes | N/A | Yes | 8 oz jar | NP | |
| 15 | 508133 | Yes | N/A | Yes | 8 oz jar | NP | |
| 16 | 508134 | Yes | N/A | Yes | 8 oz jar | NP | |

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 23L0931
Date Received: 12/29/2023

**2nd Review**
**Were all containers scanned into storage/lab?** Initials TB
Are barcode labels on correct containers? Yes / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: _____ Date & Time: 12/29/23 13:53
Reviewed By: _____ Date & Time: 12/29/23 1434

ESS Laboratory
*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 2310931

| | | | |
|---|---|---|---|
| Turn Time | 5 | Days | Reporting Limits |
| Regulatory State | MA | S-1 GW-1 RT3 | |

Is this project for any of the following?: ○CT RCP ⊘MA MCP ○RGP

Electonic Deliverables: ☑Data Checker ☑Excel ☐Other (Please Specify →)

| Company Name | Project # | Project Name |
|---|---|---|
| CEC Inc. | 332-344 | MASS CEC |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Rd |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| (774) 501-2176 | (774) 501-2669 | cdalbello@cecinc.com / jkitchen@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: PCB's | HOLD |
|---|---|---|---|---|---|---|---|
| 1 | 12-29-23 | 8:50 | Grab | Soil | A-2 (~~1-2~~) (0-1) | X | |
| 2 | | 8:51 | | | A-2 (~~2-3~~) (1-2) | X | |
| 3 | | 8:53 | | | A-2 (~~3-4~~) (2-3) | X | |
| — | | 9:15 | | | A-2 (~~4-5~~) (3-4) DGB | [redacted] | X |
| — | | 9:16 | | | A-2 (~~5-6~~) (4-5) DGB | [redacted] | X |
| — | | 9:18 | | | A-2 (~~6-7~~) (5-6) DGB | [redacted] | X |
| — | | 9:19 | | | A-2 (~~7-8~~) (6-7) DGB | [redacted] | X |
| 4 | | 8:35 | | | AA-3 (~~1-2~~) (0-1) | X | |
| 5 | | 8:36 | | | AA-3 (~~2-3~~) (1-2) | X | |
| 6 | | 8:37 | | | AA-3 (~~3-4~~) (2-3) | X | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Container Type: | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | J |
| Container Volume: | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 |
| Preservation Code: | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 |
| | | | | | | | | | Number of Containers per Sample: | | | 1 |

**Laboratory Use Only**

Cooler Present: _____ ○Drop Off
Seals Intact: _____ ○Pickup
Cooler Temperature: 3 °C

Sampled by : DGB

Comments: Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 12-29-23 13:10 | Taylor Davis 12/29/23 1310 | | |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

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# CHAIN OF CUSTODY

ESS Lab # 23D0931
Reporting Limits

| | | | |
|---|---|---|---|
| Turn Time | 5 | Days | |
| Regulatory State | MA | 5-16W-1/2/3 | |

Is this project for any of the following?: ○CT RCP ⊘MA MCP ○RGP

Electonic Deliverables: ☑Data Checker ☑Excel ☐Other (Please Specify →)

| Company Name | Project # | Project Name |
|---|---|---|
| CEC Inc. | 332-344 | MASS CEC |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Rd |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| (774) 501-2176 | (774) 501-2669 | cdalbello@cecinc.com / jkitchen@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCBs | HOLD |
|---|---|---|---|---|---|---|---|
| 7 | 12-29-23 | 7:35 | Grab | Soil | A-4 (0-1) | X | |
| 8 | | 7:36 | | | A-4 (1-2) | X | |
| 9 | | 7:37 | | | A-4 (2-3) | X | |
| 10 | | 7:38 | | | A-4 (3-4) | X | |
| — | | 9:25 | | | A-4 (4-5) | | X |
| — | | 9:26 | | | A-4 (5-6) | | X |
| — | | 9:28 | | | A-4 (6-7) | | X |
| — | | 9:29 | | | A-4 (7-8) | | X |
| 11 | | 8:40 | | | B-3 (1~~-2~~) (0-1) | X | |
| 12 | | 8:41 | | | B-3 (2~~-3~~) (1-2) | X | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type: | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | J | J |
| Container Volume: | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 | 10 |
| Preservation Code: | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 | 1 |
| Number of Containers per Sample: | | | | | | | | | | | | 1 | 1 |

**Laboratory Use Only**

Cooler Present: _____ ○Drop Off
Seals Intact: _____ ○Pickup
Cooler Temperature: 3 °C ice

Sampled by : DCB

Comments: Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 12-29-23 13:10 | 12/29/23 1310 | | |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

185 Frances Avenue
Cranston, RI 02921
Phone: 401-461-7181
[redacted]
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# CHAIN OF CUSTODY

ESS Lab # 23L0931 | Page 7 of 7

Turn Time: ☐ >5 ☒ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day

Regulatory State: MA Criteria: S-1 GW-1/2/3

Is this project for any of the following?: ☐ CT RCP ☒ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

**ELECTRONIC DELIVERABLES (Final Reports are PDF)**

☒ Limit Checker ☐ State Forms ☐ EQuIS
☒ Excel ☐ Hard Copy ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

## CLIENT INFORMATION

Client: CEC
Address: 31 Bellows Rd
Raynham, MA 02767
Phone: 774-501-2176
Email Distribution List: cdalbello@cecinc.com
jkitchen@cecinc.com

## PROJECT INFORMATION

Project Name: MASS CEC
Project Location: 18 Wright St - Newbedford
Project Number: 332-344
Project Manager: Cassia Dal Bello
Bill to: client
PO#:
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

## REQUESTED ANALYSES

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCBs | Total Number of Bottles |
|---|---|---|---|---|---|---|---|
| 13 | 12-29-23 | 7:25 | Grab | Soil | J-O (0-1) | X | 1 |
| 14 | " | 7:26 | " | " | J-O (1-2) | X | 1 |
| 15 | " | 7:27 | " | " | J-O (2-3) | X | 1 |
| 16 | " | 7:28 | " | " | J-O (3-4) | X | 1 |

| | | | |
|---|---|---|---|
| Container Type: | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | J | 4 |
| Container Volume: | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | 10 | |
| Preservation Code: | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | 1 | |

Sampled by: DGB

**Chain needs to be filled out neatly and completely for on time delivery.**

**Laboratory Use Only**

Cooler Temperature (°C): 3.4

**Comments:** * Please specify "Other" preservative and containers types in this space

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

**Dissolved Filtration**

☐ Lab Filter

| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
|---|---|---|---|---|---|---|---|
| [signature] | 12-29-23 | 13:10 | [signature] | | | | |
| **Relinquished by (Signature)** | **Date** | **Time** | **Received by (Signature)** | **Relinquished by (Signature)** | **Date** | **Time** | **Received by (Signature)** |
| | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC - New Bedford (332-344)**
**ESS Laboratory Work Order Number: 23L0932**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
***By ESS Laboratory at 3:08 pm, Jan 08, 2024***

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0932

## SAMPLE RECEIPT

The following samples were received on December 29, 2023 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 23L0932-01 | B-3 2-3 | Soil | 8082A |
| 23L0932-02 | BB-0 0-1 | Soil | 8082A |
| 23L0932-03 | BB-0 1-2 | Soil | 8082A |
| 23L0932-04 | BB-0 2-3 | Soil | 8082A |
| 23L0932-05 | BB-1 0-1 | Soil | 8082A |
| 23L0932-06 | BB-1 1-2 | Soil | 8082A |
| 23L0932-07 | BB-1 2-3 | Soil | 8082A |
| 23L0932-08 | BB-2 1-2 | Soil | 8082A |
| 23L0932-09 | BB-2 2-3 | Soil | 8082A |
| 23L0932-10 | BB-2 3-4 | Soil | 8082A |
| 23L0932-11 | C-2 0-1 | Soil | 8082A |
| 23L0932-12 | C-2 1-2 | Soil | 8082A |
| 23L0932-13 | C-2 2-3 | Soil | 8082A |
| 23L0932-14 | C-2 3-4 | Soil | 8082A |
| 23L0932-15 | C-4 0-1 | Soil | 8082A |
| 23L0932-16 | C-4 1-2 | Soil | 8082A |
| 23L0932-17 | C-4 2-3 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23L0932

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**

23L0932-07 **Lower value is used due to matrix interferences (LC).**
Aroclor 1248

23L0932-07 **Percent difference between primary and confirmation results exceeds 40% (P).**
Aroclor 1248

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0932

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23L0932

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **23L0932-01 through 23L0932-17**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: January 08, 2024

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: B-3 2-3
Date Sampled: 12/29/23 08:42
Percent Solids: 94
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0932
ESS Laboratory Sample ID: 23L0932-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 21:01 | | DA40203 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 21:01 | | DA40203 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 21:01 | | DA40203 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 21:01 | | DA40203 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 21:01 | | DA40203 |
| **Aroclor 1254** | **0.09** (0.05) | | 8082A | | 1 | 01/03/24 21:01 | | DA40203 |
| Aroclor 1260 [2C] | ND (0.05) | | 8082A | | 1 | 01/03/24 21:01 | | DA40203 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 21:01 | | DA40203 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 21:01 | | DA40203 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *85 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: BB-0 0-1
Date Sampled: 12/29/23 07:40
Percent Solids: 92
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0932
ESS Laboratory Sample ID: 23L0932-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 12:18 | | DA40204 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 12:18 | | DA40204 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 12:18 | | DA40204 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 12:18 | | DA40204 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 12:18 | | DA40204 |
| **Aroclor 1254 [2C]** | **0.8** (0.05) | | 8082A | | 1 | 01/03/24 12:18 | | DA40204 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 12:18 | | DA40204 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 12:18 | | DA40204 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 12:18 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *81 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: BB-0 1-2
Date Sampled: 12/29/23 07:41
Percent Solids: 89
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0932
ESS Laboratory Sample ID: 23L0932-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 12:37 | | DA40204 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 12:37 | | DA40204 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 12:37 | | DA40204 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 12:37 | | DA40204 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 01/03/24 12:37 | | DA40204 |
| Aroclor 1254 | ND (0.06) | | 8082A | | 1 | 01/03/24 12:37 | | DA40204 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 12:37 | | DA40204 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 12:37 | | DA40204 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 12:37 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *78 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: BB-0 2-3
Date Sampled: 12/29/23 07:42
Percent Solids: 87
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0932
ESS Laboratory Sample ID: 23L0932-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 12:56 | | DA40204 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 12:56 | | DA40204 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 12:56 | | DA40204 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 12:56 | | DA40204 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 01/03/24 12:56 | | DA40204 |
| **Aroclor 1254 [2C]** | **1.5** (0.1) | | 8082A | | 2 | 01/03/24 15:14 | | DA40204 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 12:56 | | DA40204 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 12:56 | | DA40204 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 12:56 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *79 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: BB-1 0-1
Date Sampled: 12/29/23 08:30
Percent Solids: 90
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0932
ESS Laboratory Sample ID: 23L0932-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:16 | | DA40204 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:16 | | DA40204 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:16 | | DA40204 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:16 | | DA40204 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:16 | | DA40204 |
| Aroclor 1254 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:16 | | DA40204 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:16 | | DA40204 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:16 | | DA40204 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:16 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *86 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: BB-1 1-2
Date Sampled: 12/29/23 08:31
Percent Solids: 91
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0932
ESS Laboratory Sample ID: 23L0932-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 13:36 | | DA40204 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 13:36 | | DA40204 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 13:36 | | DA40204 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 13:36 | | DA40204 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 13:36 | | DA40204 |
| **Aroclor 1254 [2C]** | **0.3** (0.05) | | 8082A | | 1 | 01/03/24 13:36 | | DA40204 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 13:36 | | DA40204 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 13:36 | | DA40204 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 13:36 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: BB-1 2-3
Date Sampled: 12/29/23 08:32
Percent Solids: 85
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0932
ESS Laboratory Sample ID: 23L0932-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:56 | | DA40204 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:56 | | DA40204 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:56 | | DA40204 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:56 | | DA40204 |
| **Aroclor 1248** | **P, LC 0.1** (0.06) | | 8082A | | 1 | 01/03/24 13:56 | | DA40204 |
| **Aroclor 1254 [2C]** | **0.7** (0.06) | | 8082A | | 1 | 01/03/24 13:56 | | DA40204 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:56 | | DA40204 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:56 | | DA40204 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:56 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: BB-2 1-2
Date Sampled: 12/29/23 08:25
Percent Solids: 90
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0932
ESS Laboratory Sample ID: 23L0932-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:15 | | DA40204 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:15 | | DA40204 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:15 | | DA40204 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:15 | | DA40204 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:15 | | DA40204 |
| Aroclor 1254 [2C] | ND (0.06) | | 8082A | | 1 | 01/03/24 14:15 | | DA40204 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:15 | | DA40204 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:15 | | DA40204 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 14:15 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *84 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: BB-2 2-3
Date Sampled: 12/29/23 08:26
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0932
ESS Laboratory Sample ID: 23L0932-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:35 | | DA40204 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:35 | | DA40204 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:35 | | DA40204 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:35 | | DA40204 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:35 | | DA40204 |
| **Aroclor 1254 [2C]** | **0.5** (0.05) | | 8082A | | 1 | 01/03/24 14:35 | | DA40204 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:35 | | DA40204 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:35 | | DA40204 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:35 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: BB-2 3-4
Date Sampled: 12/29/23 08:27
Percent Solids: 93
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0932
ESS Laboratory Sample ID: 23L0932-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:54 | | DA40204 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:54 | | DA40204 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:54 | | DA40204 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:54 | | DA40204 |
| **Aroclor 1248 [2C]** | **0.09** (0.05) | | 8082A | | 1 | 01/03/24 14:54 | | DA40204 |
| **Aroclor 1254 [2C]** | **0.4** (0.05) | | 8082A | | 1 | 01/03/24 14:54 | | DA40204 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:54 | | DA40204 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:54 | | DA40204 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:54 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *84 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: C-2 0-1
Date Sampled: 12/29/23 08:10
Percent Solids: 89
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0932
ESS Laboratory Sample ID: 23L0932-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 17:49 | | DA40204 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 17:49 | | DA40204 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 17:49 | | DA40204 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 17:49 | | DA40204 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 01/03/24 17:49 | | DA40204 |
| Aroclor 1254 | ND (0.06) | | 8082A | | 1 | 01/03/24 17:49 | | DA40204 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 17:49 | | DA40204 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 17:49 | | DA40204 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 17:49 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *81 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: C-2 1-2
Date Sampled: 12/29/23 08:11
Percent Solids: 91
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0932
ESS Laboratory Sample ID: 23L0932-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:09 | | DA40204 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:09 | | DA40204 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:09 | | DA40204 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:09 | | DA40204 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:09 | | DA40204 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:09 | | DA40204 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:09 | | DA40204 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:09 | | DA40204 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:09 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: C-2 2-3
Date Sampled: 12/29/23 08:12
Percent Solids: 93
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0932
ESS Laboratory Sample ID: 23L0932-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:28 | | DA40204 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:28 | | DA40204 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:28 | | DA40204 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:28 | | DA40204 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:28 | | DA40204 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:28 | | DA40204 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:28 | | DA40204 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:28 | | DA40204 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:28 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: C-2 3-4
Date Sampled: 12/29/23 08:13
Percent Solids: 92
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0932
ESS Laboratory Sample ID: 23L0932-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:47 | | DA40204 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:47 | | DA40204 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:47 | | DA40204 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:47 | | DA40204 |
| **Aroclor 1248 [2C]** | **0.1** (0.05) | | 8082A | | 1 | 01/03/24 18:47 | | DA40204 |
| **Aroclor 1254 [2C]** | **0.3** (0.05) | | 8082A | | 1 | 01/03/24 18:47 | | DA40204 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:47 | | DA40204 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:47 | | DA40204 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:47 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *81 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: C-4 0-1
Date Sampled: 12/29/23 07:45
Percent Solids: 93
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0932
ESS Laboratory Sample ID: 23L0932-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:06 | | DA40204 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:06 | | DA40204 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:06 | | DA40204 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:06 | | DA40204 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:06 | | DA40204 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:06 | | DA40204 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:06 | | DA40204 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:06 | | DA40204 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:06 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *88 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *85 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: C-4 1-2
Date Sampled: 12/29/23 07:46
Percent Solids: 95
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0932
ESS Laboratory Sample ID: 23L0932-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:26 | | DA40204 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:26 | | DA40204 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:26 | | DA40204 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:26 | | DA40204 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:26 | | DA40204 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | | 8082A | | 1 | 01/03/24 19:26 | | DA40204 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:26 | | DA40204 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:26 | | DA40204 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:26 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *77 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: C-4 2-3
Date Sampled: 12/29/23 07:47
Percent Solids: 92
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0932
ESS Laboratory Sample ID: 23L0932-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:45 | | DA40204 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:45 | | DA40204 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:45 | | DA40204 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:45 | | DA40204 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:45 | | DA40204 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | | 8082A | | 1 | 01/03/24 19:45 | | DA40204 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:45 | | DA40204 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:45 | | DA40204 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:45 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *78 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0932

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DA40203 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 93 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 96 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 92 | 40-140 | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | 4 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | 2 | 30 | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 91 | 40-140 | 5 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | 4 | 30 | |
| **Batch DA40204 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0932

## Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DA40204 - 3540C** | | | | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 87 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 85 | 40-140 | 3 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 93 | 40-140 | 3 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 86 | 40-140 | 3 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 92 | 40-140 | 2 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23L0932

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| P | Percent difference between primary and confirmation results exceeds 40% (P). |
| LC | Lower value is used due to matrix interferences (LC). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0932

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: Client

ESS Project ID: 23L0932
Date Received: 12/29/2023
Project Due Date: 1/8/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 3 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / (No)
    b. Does methanol cover soil completely? Yes / No / (NA)

13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / (No)
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 508135 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 508136 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 508137 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 508138 | Yes | N/A | Yes | 8 oz jar | NP | |
| 5 | 508139 | Yes | N/A | Yes | 8 oz jar | NP | |
| 6 | 508140 | Yes | N/A | Yes | 8 oz jar | NP | |
| 7 | 508141 | Yes | N/A | Yes | 8 oz jar | NP | |
| 8 | 508142 | Yes | N/A | Yes | 8 oz jar | NP | |
| 9 | 508143 | Yes | N/A | Yes | 8 oz jar | NP | |
| 10 | 508144 | Yes | N/A | Yes | 8 oz jar | NP | |
| 11 | 508145 | Yes | N/A | Yes | 8 oz jar | NP | |
| 12 | 508146 | Yes | N/A | Yes | 8 oz jar | NP | |
| 13 | 508147 | Yes | N/A | Yes | 8 oz jar | NP | |
| 14 | 508148 | Yes | N/A | Yes | 8 oz jar | NP | |
| 15 | 508149 | Yes | N/A | Yes | 8 oz jar | NP | |
| 16 | 508150 | Yes | N/A | Yes | 8 oz jar | NP | |
| 17 | 508151 | Yes | N/A | Yes | 8 oz jar | NP | |

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 23L0932
Date Received: 12/29/2023

**2nd Review**

**Were all containers scanned into storage/lab?** Initials TO

Are barcode labels on correct containers? Yes / No

Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA

Are all Hex Chrome stickers attached? Yes / No / NA

Are all QC stickers attached? Yes / No / NA

Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: _____ Date & Time: 12/29/23 13:57

Reviewed By: _____ Date & Time: 12/29/23 1441

ESS LABORATORY
185 Frances Avenue
Cranston, RI 02921
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 23D932 | Page 3 of 7

TURN TIME ☐ >5 ~~☐3~~ ☐4 ☐3 ☐2 ☐1 ☐ Same Day

Regulatory State/Criteria MA 5-1-GW-1/2/3

Is this project for any of the following?:
☐ CT RCP ☑ ~~☐~~ MA MCP ☐ RGP ☐ Permit

ELECTRONIC DELIVERABLES (Final Reports are PDF)
☑ Limit Checker ☐ State Forms ☐ EQuIS
☑ Excel ☐ Hard Copy ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

## CLIENT INFORMATION

Client: CEC
Address: 31 Bellows Road
Raynham, MA 02767
Phone: 774-501-2176
Email Distribution List: cdalbello@cecinc.com
jkitchen@cecinc.com

## PROJECT INFORMATION

Project Name: MASS CEC
Project Location: 18 Wright St. - New Bedford
Project Number: 332-344
Project Manager: Cassia Dal Bello
Bill to: Same as Client Info.
PO#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

## REQUESTED ANALYSIS

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCBs | Total Number of Bottles |
|---|---|---|---|---|---|---|---|
| 1 | 12-29-23 | 8:42 | Grab | Soil | B-3 (3-4) (2-3) | X | |
| 2 | | 7:40 | | | BB-0 (1-2) (0-1) | X | |
| 3 | | 7:41 | | | BB-0 (2-3) (1-2) | X | |
| 4 | | 7:42 | | | BB-0 (3-4) (2-3) | X | |
| 5 | | 8:30 | | | BB-1 (1-2) (0-1) | X | |
| 6 | | 8:31 | | | BB-1 (2-3) (1-2) | X | |
| 7 | | 8:32 | | | BB-1 (3-4) (2-3) | X | |
| 8 | | 8:25 | | | BB-2 (1-2) | X | |
| 9 | | 8:26 | | | BB-2 (2-3) | X | |
| 10 | | 8:27 | | | BB-2 (3-4) | X | |
| Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | | | | | | J | |
| Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | | | | | | 10 | 10 |
| Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | | | | | | 1 | |

Sampled by : DGB

**Chain needs to be filled out neatly and completely for on time delivery.**

Comments: * Please specify "Other" preservative and containers types in this space

3 ice

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration
☐ Lab Filter

| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
|---|---|---|---|---|---|---|---|
| DGB ~~AAT~~ | 12-29-23 | 13:10 | [signature] | | | | |
| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
| | | | | | | | |

ESS LABORATORY

185 Frances Avenue
Cranston, RI 02921
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 23L0932 | Page 4 of 7

TURN TIME ☐ >5 ☒ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day

Regulatory State/Criteria MA 5-1 GW-1/2/13

Is this project for any of the following?:
☐ CT RCP ☒ MA MCP ☐ RGP ☐ Permit

ELECTRONIC DELIVERABLES (Final Reports are PDF)
☑ Limit Checker ☐ State Forms ☐ EQuIS
☑ Excel ☐ Hard Copy ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

## CLIENT INFORMATION

Client: CEC
Address: 31 Bellows Road
Raynham, MA 02767
Phone: 774-501-2176
Email Distribution List: cdalbello@cecinc.com
jkitchen@cecinc.com

## PROJECT INFORMATION

Project Name: MASS CEC
Project Location: 18 Wright St - New Bedford, MA
Project Number: 332-344
Project Manager: Cassia Dal Bello
Bill to: Same as Client Info.
PO#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

## REQUESTED ANALYSIS

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCBs | HOLD | Total Number of Bottles |
|---|---|---|---|---|---|---|---|---|
| — | 12-29-23 | 9:35 | Grab | Soil | BB-2 (5-6) | | X | 1 |
| — | | 9:37 | | | BB-2 (6-7) | | X | 1 |
| — | | 9:39 | | | BB-2 (7-8) | | X | 1 |
| 11 | | 8:10 | | | C-2 (0-1) | X | | 1 |
| 12 | | 8:11 | | | C-2 (1-2) | X | | 1 |
| 13 | | 8:12 | | | C-2 (2-3) | X | | 1 |
| 14 | | 8:13 | | | C-2 (3-4) | X | | 1 |
| 15 | | 7:45 | | | C-4 (~~1-2~~) (0-1) | X | | 1 |
| 16 | | 7:46 | | | C-4 (~~2-3~~) (1-2) | X | | 1 |
| 17 | ↓ | 7:47 | ↓ | ↓ | C-4 (~~3-4~~) (2-3) | X | | 1 |
| Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | | | | | | J | J | |
| Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | | | | | | 10 | 10 | 10 |
| Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | | | | | | 1 | 1 | |

Sampled by : DGB

**Chain needs to be filled out neatly and completely for on time delivery.**

Comments: * Please specify "Other" preservative and containers types in this space

Ice

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration
☐ Lab Filter

| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
|---|---|---|---|---|---|---|---|
| [signature] | 12-29-23 | 13:10 | [signature] | | | | |
| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
| | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC - New Bedford (332-344)**
**ESS Laboratory Work Order Number: 23L0933**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 5:48 pm, Jan 08, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0933

## SAMPLE RECEIPT

The following samples were received on December 29, 2023 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 23L0933-01 | D-0 0-1 | Soil | 8082A |
| 23L0933-02 | D-0 1-2 | Soil | 8082A |
| 23L0933-03 | D-0 2-3 | Soil | 8082A |
| 23L0933-04 | D-1 0-1 | Soil | 8082A |
| 23L0933-05 | D-1 1-2 | Soil | 8082A |
| 23L0933-06 | D-1 2-3 | Soil | 8082A |
| 23L0933-07 | D-3 0-1 | Soil | 8082A |
| 23L0933-08 | D-3 1-2 | Soil | 8082A |
| 23L0933-09 | D-3 2-3 | Soil | 8082A |
| 23L0933-10 | E-0 0-1 | Soil | 8082A |
| 23L0933-11 | E-0 1-2 | Soil | 8082A |
| 23L0933-12 | E-0 2-3 | Soil | 8082A |
| 23L0933-13 | F-0 1-2 | Soil | 8082A |
| 23L0933-14 | F-0 2-3 | Soil | 8082A |
| 23L0933-15 | F-0 3-4 | Soil | 8082A |
| 23L0933-16 | H-0 0-1 | Soil | 8082A |
| 23L0933-17 | H-0 1-2 | Soil | 8082A |
| 23L0933-18 | H-0 2-3 | Soil | 8082A |
| 23L0933-19 | F-0 0-1 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23L0933

## PROJECT NARRATIVE

**No unusual observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0933

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0933

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **23L0933-01 through 23L0933-19**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes (x) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes (x) No ( )* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: January 08, 2024
Printed Name: Laur[illegible] Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: D-0 0-1
Date Sampled: 12/29/23 07:30
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0933
ESS Laboratory Sample ID: 23L0933-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:04 | | DA40204 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:04 | | DA40204 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:04 | | DA40204 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:04 | | DA40204 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:04 | | DA40204 |
| **Aroclor 1254 [2C]** | **0.3** (0.06) | | 8082A | | 1 | 01/03/24 20:04 | | DA40204 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:04 | | DA40204 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:04 | | DA40204 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:04 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *87 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *86 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: D-0 1-2
Date Sampled: 12/29/23 07:31
Percent Solids: 92
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0933
ESS Laboratory Sample ID: 23L0933-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:24 | | DA40204 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:24 | | DA40204 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:24 | | DA40204 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:24 | | DA40204 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:24 | | DA40204 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:24 | | DA40204 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:24 | | DA40204 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:24 | | DA40204 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:24 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: D-0 2-3
Date Sampled: 12/29/23 07:32
Percent Solids: 92
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0933
ESS Laboratory Sample ID: 23L0933-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:43 | | DA40204 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:43 | | DA40204 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:43 | | DA40204 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:43 | | DA40204 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:43 | | DA40204 |
| Aroclor 1254 [2C] | ND (0.05) | | 8082A | | 1 | 01/03/24 20:43 | | DA40204 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:43 | | DA40204 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:43 | | DA40204 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 20:43 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *81 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: D-1 0-1
Date Sampled: 12/29/23 09:10
Percent Solids: 89
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0933
ESS Laboratory Sample ID: 23L0933-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 21:02 | | DA40204 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 21:02 | | DA40204 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 21:02 | | DA40204 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 21:02 | | DA40204 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 01/03/24 21:02 | | DA40204 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | | 8082A | | 1 | 01/03/24 21:02 | | DA40204 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 21:02 | | DA40204 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 21:02 | | DA40204 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 21:02 | | DA40204 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: D-1 1-2
Date Sampled: 12/29/23 09:13
Percent Solids: 90
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0933
ESS Laboratory Sample ID: 23L0933-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:40 | | DA40205 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:40 | | DA40205 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:40 | | DA40205 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:40 | | DA40205 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:40 | | DA40205 |
| Aroclor 1254 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:40 | | DA40205 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:40 | | DA40205 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:40 | | DA40205 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 13:40 | | DA40205 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: D-1 2-3
Date Sampled: 12/29/23 09:14
Percent Solids: 90
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0933
ESS Laboratory Sample ID: 23L0933-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:00 | | DA40205 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:00 | | DA40205 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:00 | | DA40205 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:00 | | DA40205 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:00 | | DA40205 |
| Aroclor 1254 [2C] | ND (0.05) | | 8082A | | 1 | 01/03/24 14:00 | | DA40205 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:00 | | DA40205 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:00 | | DA40205 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:00 | | DA40205 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *90 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: D-3 0-1
Date Sampled: 12/29/23 09:00
Percent Solids: 92
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0933
ESS Laboratory Sample ID: 23L0933-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:20 | | DA40205 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:20 | | DA40205 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:20 | | DA40205 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:20 | | DA40205 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:20 | | DA40205 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:20 | | DA40205 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:20 | | DA40205 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:20 | | DA40205 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:20 | | DA40205 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *90 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: D-3 1-2
Date Sampled: 12/29/23 09:03
Percent Solids: 92
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0933
ESS Laboratory Sample ID: 23L0933-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:40 | | DA40205 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:40 | | DA40205 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:40 | | DA40205 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:40 | | DA40205 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:40 | | DA40205 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:40 | | DA40205 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:40 | | DA40205 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:40 | | DA40205 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:40 | | DA40205 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *86 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: D-3 2-3
Date Sampled: 12/29/23 09:05
Percent Solids: 93
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0933
ESS Laboratory Sample ID: 23L0933-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:59 | | DA40205 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:59 | | DA40205 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:59 | | DA40205 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:59 | | DA40205 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:59 | | DA40205 |
| **Aroclor 1254** | **0.2** (0.05) | | 8082A | | 1 | 01/03/24 14:59 | | DA40205 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:59 | | DA40205 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:59 | | DA40205 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 14:59 | | DA40205 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *86 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: E-0 0-1
Date Sampled: 12/29/23 08:00
Percent Solids: 95
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0933
ESS Laboratory Sample ID: 23L0933-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 15:20 | | DA40205 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 15:20 | | DA40205 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 15:20 | | DA40205 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 15:20 | | DA40205 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 15:20 | | DA40205 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | | 8082A | | 1 | 01/03/24 15:20 | | DA40205 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 15:20 | | DA40205 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 15:20 | | DA40205 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 15:20 | | DA40205 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *90 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: E-0 1-2
Date Sampled: 12/29/23 08:01
Percent Solids: 94
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0933
ESS Laboratory Sample ID: 23L0933-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 17:58 | | DA40205 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 17:58 | | DA40205 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 17:58 | | DA40205 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 17:58 | | DA40205 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 17:58 | | DA40205 |
| Aroclor 1254 [2C] | ND (0.05) | | 8082A | | 1 | 01/03/24 17:58 | | DA40205 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 17:58 | | DA40205 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 17:58 | | DA40205 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 17:58 | | DA40205 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *93 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: E-0 2-3
Date Sampled: 12/29/23 08:03
Percent Solids: 93
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0933
ESS Laboratory Sample ID: 23L0933-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:18 | | DA40205 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:18 | | DA40205 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:18 | | DA40205 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:18 | | DA40205 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:18 | | DA40205 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:18 | | DA40205 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:18 | | DA40205 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:18 | | DA40205 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:18 | | DA40205 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *90 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: F-0 1-2
Date Sampled: 12/29/23 08:16
Percent Solids: 95
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0933
ESS Laboratory Sample ID: 23L0933-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:37 | | DA40205 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:37 | | DA40205 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:37 | | DA40205 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:37 | | DA40205 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:37 | | DA40205 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:37 | | DA40205 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:37 | | DA40205 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:37 | | DA40205 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:37 | | DA40205 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *91 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: F-0 2-3
Date Sampled: 12/29/23 08:17
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0933
ESS Laboratory Sample ID: 23L0933-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:57 | | DA40205 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:57 | | DA40205 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:57 | | DA40205 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:57 | | DA40205 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:57 | | DA40205 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:57 | | DA40205 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:57 | | DA40205 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:57 | | DA40205 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 18:57 | | DA40205 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *96 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: F-0 3-4
Date Sampled: 12/29/23 08:18
Percent Solids: 91
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0933
ESS Laboratory Sample ID: 23L0933-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:17 | | DA40205 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:17 | | DA40205 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:17 | | DA40205 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:17 | | DA40205 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:17 | | DA40205 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:17 | | DA40205 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:17 | | DA40205 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:17 | | DA40205 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 01/03/24 19:17 | | DA40205 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *97 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: H-0 0-1
Date Sampled: 12/29/23 08:05
Percent Solids: 88
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0933
ESS Laboratory Sample ID: 23L0933-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 19:37 | | DA40205 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 19:37 | | DA40205 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 19:37 | | DA40205 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 19:37 | | DA40205 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 01/03/24 19:37 | | DA40205 |
| **Aroclor 1254 [2C]** | **0.08** (0.06) | | 8082A | | 1 | 01/03/24 19:37 | | DA40205 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 19:37 | | DA40205 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 19:37 | | DA40205 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 19:37 | | DA40205 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *90 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: H-0 1-2
Date Sampled: 12/29/23 08:06
Percent Solids: 85
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0933
ESS Laboratory Sample ID: 23L0933-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 19:56 | | DA40205 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 19:56 | | DA40205 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 19:56 | | DA40205 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 19:56 | | DA40205 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 01/03/24 19:56 | | DA40205 |
| **Aroclor 1254 [2C]** | **0.06** (0.06) | | 8082A | | 1 | 01/03/24 19:56 | | DA40205 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 19:56 | | DA40205 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 19:56 | | DA40205 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 19:56 | | DA40205 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *92 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: H-0 2-3
Date Sampled: 12/29/23 08:08
Percent Solids: 85
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0933
ESS Laboratory Sample ID: 23L0933-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/2/24 10:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:16 | | DA40205 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:16 | | DA40205 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:16 | | DA40205 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:16 | | DA40205 |
| **Aroclor 1248** | **0.2** (0.06) | | 8082A | | 1 | 01/03/24 20:16 | | DA40205 |
| **Aroclor 1254** | **0.3** (0.06) | | 8082A | | 1 | 01/03/24 20:16 | | DA40205 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:16 | | DA40205 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:16 | | DA40205 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/03/24 20:16 | | DA40205 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *92 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: F-0 0-1
Date Sampled: 12/29/23 00:00
Percent Solids: 88
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 23L0933
ESS Laboratory Sample ID: 23L0933-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 1/5/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 01/08/24 14:58 | | DA40502 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 01/08/24 14:58 | | DA40502 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 01/08/24 14:58 | | DA40502 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 01/08/24 14:58 | | DA40502 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 01/08/24 14:58 | | DA40502 |
| **Aroclor 1254 [2C]** | **2.2** (0.3) | | 8082A | | 5 | 01/08/24 15:37 | | DA40502 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 01/08/24 14:58 | | DA40502 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 01/08/24 14:58 | | DA40502 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 01/08/24 14:58 | | DA40502 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *74 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *63 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0933

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DA40204 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 87 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 85 | 40-140 | 3 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 93 | 40-140 | 3 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 86 | 40-140 | 3 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 92 | 40-140 | 2 | 30 | |
| **Batch DA40205 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0933

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DA40205 - 3540C** | | | | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 73 | 40-140 | 11 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 75 | 40-140 | 11 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 74 | 40-140 | 11 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | 11 | 30 | |
| **Batch DA40502 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 86 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 85 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 0.002 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 87 | 40-140 | 0.7 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 85 | 40-140 | 0.05 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0933

## Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DA40502 - 3540C** | | | | | | | | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | 0.6 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 23L0933

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford

ESS Laboratory Work Order: 23L0933

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: Client

ESS Project ID: 23L0933
Date Received: 12/29/2023
Project Due Date: 1/8/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 3 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / (No)
    b. Does methanol cover soil completely? Yes / No / (NA)

13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

Recieved a Jar labeled "FO(0-1)" Thats not listed on any of the chains. Held in SK fridge

14. Was there a need to contact Project Manager? (Yes) / No
    a. Was there a need to contact the client? (Yes) / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 508152 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 508153 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 508154 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 508155 | Yes | N/A | Yes | 8 oz jar | NP | |
| 5 | 508156 | Yes | N/A | Yes | 8 oz jar | NP | |
| 6 | 508157 | Yes | N/A | Yes | 8 oz jar | NP | |
| 7 | 508158 | Yes | N/A | Yes | 8 oz jar | NP | |
| 8 | 508159 | Yes | N/A | Yes | 8 oz jar | NP | |
| 9 | 508160 | Yes | N/A | Yes | 8 oz jar | NP | |
| 10 | 508161 | Yes | N/A | Yes | 8 oz jar | NP | |
| 11 | 508162 | Yes | N/A | Yes | 8 oz jar | NP | |
| 12 | 508163 | Yes | N/A | Yes | 8 oz jar | NP | |
| 13 | 508164 | Yes | N/A | Yes | 8 oz jar | NP | |
| 14 | 508165 | Yes | N/A | Yes | 8 oz jar | NP | |
| 15 | 508166 | Yes | N/A | Yes | 8 oz jar | NP | |
| 16 | 508167 | Yes | N/A | Yes | 8 oz jar | NP | |
| 17 | 508168 | Yes | N/A | Yes | 8 oz jar | NP | |

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 23L0933
Date Received: 12/29/2023

| | | | | | | |
|---|---|---|---|---|---|---|
| 18 | 508169 | Yes | N/A | Yes | 8 oz jar | NP |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials JD

Are barcode labels on correct containers? Yes / No

Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA

Are all Hex Chrome stickers attached? Yes / No / NA

Are all QC stickers attached? Yes / No / NA

Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: _____ Date & Time: 12/29/23 14:01

Reviewed By: _____ Date & Time: 12/29/23 1447

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: Client

ESS Project ID: 23L0933
Date Received: 12/29/2023
Project Due Date: 1/8/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 3 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

Added sample -19 per client - JA 1/8/24

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 508152 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 508153 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 508154 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 508155 | Yes | N/A | Yes | 8 oz jar | NP | |
| 5 | 508156 | Yes | N/A | Yes | 8 oz jar | NP | |
| 6 | 508157 | Yes | N/A | Yes | 8 oz jar | NP | |
| 7 | 508158 | Yes | N/A | Yes | 8 oz jar | NP | |
| 8 | 508159 | Yes | N/A | Yes | 8 oz jar | NP | |
| 9 | 508160 | Yes | N/A | Yes | 8 oz jar | NP | |
| 10 | 508161 | Yes | N/A | Yes | 8 oz jar | NP | |
| 11 | 508162 | Yes | N/A | Yes | 8 oz jar | NP | |
| 12 | 508163 | Yes | N/A | Yes | 8 oz jar | NP | |
| 13 | 508164 | Yes | N/A | Yes | 8 oz jar | NP | |
| 14 | 508165 | Yes | N/A | Yes | 8 oz jar | NP | |
| 15 | 508166 | Yes | N/A | Yes | 8 oz jar | NP | |
| 16 | 508167 | Yes | N/A | Yes | 8 oz jar | NP | |
| 17 | 508168 | Yes | N/A | Yes | 8 oz jar | NP | |

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 23L0933
Date Received: 12/29/2023

| | | | | | | |
|---|---|---|---|---|---|---|
| 18 | 508169 | Yes | N/A | Yes | 8 oz jar | NP |
| 19 | 508571 | Yes | N/A | Yes | 8 oz jar | NP |

**2nd Review**

Initials

**Were all containers scanned into storage/lab?** Yes / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: _____ Date & Time: 1/8/24 1020

Reviewed By: _____ Date & Time: _____

ESS LABORATORY
185 Frances Avenue
Cranston, RI 02921
Phone: 401-461-7181
[redacted]
www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 23L0933 | Page 5 of 7

Turn Time: ☐ >5 ☑ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day

Regulatory State: MA Criteria: S-1 0W-1/2/3

Is this project for any of the following?: ☐ CT RCP ☑ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF): ☑ Limit Checker ☐ State Forms ☐ EQuIS ☑ Excel ☐ Hard Copy ☐ Enviro Data ☐ CLP-Like Package ☐ Other (Specify) →

## CLIENT INFORMATION

Client: CEC
Address: 31 Bellows Rd
Raynham, MA 02767
Phone: 774-501-2176
Email Distribution List: cdalbello@cecinc.com; jkitchen@cecinc.com

## PROJECT INFORMATION

Project Name: MASS CEC
Project Location: 18 Wright St - New Bedford
Project Number: 332-344
Project Manager: Cassia Dal Bello
Bill to: client
PO#:
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

## REQUESTED ANALYSES

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | | PCBs | Total Number of Bottles |
|---|---|---|---|---|---|---|---|---|
| 1 | 12-29-23 | 7:30 | Grab | Soil | D-0 | ~~(1-2)~~ (0-1) | X | 1 |
| 2 | | 7:31 | | | D-0 | ~~(2-3)~~ (1-2) | X | 1 |
| 3 | | 7:32 | | | D-0 | ~~(3-4)~~ (2-3) | X | 1 |
| 4 | | 9:10 | | | D-1 | ~~(1-2)~~ (0-1) | X | 1 |
| 5 | | 9:13 | | | D-1 | ~~(2-3)~~ (1-2) | X | 1 |
| 6 | | 9:14 | | | D-1 | ~~(3-4)~~ (2-3) | X | 1 |
| 7 | | 9:00 | | | D-3 | ~~(1-2)~~ (0-1) | X | 1 |
| 8 | | 9:03 | | | D-3 | ~~(2-3)~~ (1-2) | X | 1 |
| 9 | | 9:05 | | | D-3 | ~~(3-4)~~ (2-3) | X | 1 |
| — | | | | | | | | 0 |

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*

Sampled by: DGB

**Chain needs to be filled out neatly and completely for on time delivery.**

Laboratory Use Only
Cooler Temperature (°C): 3 ic

Comments: * Please specify "Other" preservative and containers types in this space

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration: ☐ Lab Filter

| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
|---|---|---|---|---|---|---|---|
| DGB | 12-29-23 | 13:10 | [signature] | | | | |
| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
| | | | | | | | |

ESS LABORATORY
185 Frances Avenue
Cranston, RI 02921
Phone: 401-461-7181
[redacted]
www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 2310933 | Page 6 of 7

Turn Time: ☐ >5 ☐ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day
Regulatory State: MA Criteria: S-1 GW-1/2/3
Is this project for any of the following?: ☐ CT RCP ☑ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF)
☑ Limit Checker ☐ State Forms ☐ EQuIS
☑ Excel ☐ Hard Copy ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

## CLIENT INFORMATION

Client: CEC
Address: 31 Bellows Rd
Raynham, MA 02767
Phone: 774-501-2176
Email Distribution List: cdalbello@cecinc.com
jkitchen@cecinc.com

## PROJECT INFORMATION

Project Name: MASS CEC
Project Location: 18 Wright St-New Bedford
Project Number: 332-344
Project Manager: Cassia Dal Bello
Bill to: Client
PO#:
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

## REQUESTED ANALYSES

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | | | PCBs | Total Number of Bottles |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 12-29-23 | 8:00 | Grab | Soil | E-O | ~~(1-2)~~ | (0-1) | X | 1 |
| 11 | | 8:01 | | | E-O | ~~(2-3)~~ | (1-2) | X | 1 |
| 12 | | 8:03 | | | E-O | ~~(3-4)~~ | (2-3) | X | 1 |
| 13 | | 8:16 | | | F-O | (1-2) | | X | 1 |
| 14 | | 8:17 | | | F-O | (2-3) | | X | 1 |
| 15 | | 8:18 | | | F-O | (3-4) | | X | 1 |
| 16 | | 8:05 | | | H-O | ~~(1-2)~~ | (0-1) | X | 1 |
| 17 | | 8:06 | | | H-O | ~~(2-3)~~ | (1-2) | X | 1 |
| 18 | | 8:08 | | | H-O | ~~(3-4)~~ | (2-3) | X | 1 |
| — | 12-29-23 | | Grab | Soil | F-O | (0-1) | | X | 1 |

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — J
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1

Total Number of Bottles: 9

Sampled by: DCB

**Chain needs to be filled out neatly and completely for on time delivery.**

Laboratory Use Only
Cooler Temperature (°C): 3 ice

Comments: * Please specify "Other" preservative and containers types in this space

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration
☐ Lab Filter

| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
|---|---|---|---|---|---|---|---|
| [signature] | 12-29-23 | 13:10 | [signature] | | | | |
| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
| | | | | | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24D1044**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 12:23 pm, May 08, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

## SAMPLE RECEIPT

The following samples were received on April 30, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Low Level VOA vials were frozen by ESS Laboratory on 4/30/24 at 17:49.**
**Tetrahydrofuran is reported above the MA CAM reporting limit of 0.010 mg/kg.**

**Question I: All samples for EPH and Metals were analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24D1044-01 | JJ II-6 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24D1044-02 | JJ II-2 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24D1044-03 | II-8.5 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24D1044-04 | II-0.5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24D1044-05 | HH-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

| | | | |
|---|---|---|---|
| 24D1044-06 | HH-5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24D1044-08 | HH-1 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24D1044-09 | FF-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24D1044-10 | FF-5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24D1044-11 | FF-3 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24D1044-12 | FF-1 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24D1044-13 | EE-8.5 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24D1044-14 | EE-0.5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24D1044-18 | DD-1 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

## PROJECT NARRATIVE

**8081B Organochlorine Pesticides**

24D1044-04 **Lower value is used due to matrix interferences (LC).**
Dieldrin , Endosulfan II

24D1044-04 **Percent difference between primary and confirmation results exceeds 40% (P).**
Dieldrin , Endosulfan II

24D1044-08 **Lower value is used due to matrix interferences (LC).**
Endosulfan II

24D1044-08 **Percent difference between primary and confirmation results exceeds 40% (P).**
Endosulfan II

24D1044-12 **Lower value is used due to matrix interferences (LC).**
alpha-BHC [2C] , Endosulfan II

24D1044-12 **Percent difference between primary and confirmation results exceeds 40% (P).**
alpha-BHC [2C] , Endosulfan II

**Semi-Volatile Organic Compounds**

24D1044-01 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (141% @ 30-130%)

24D1044-02 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (139% @ 30-130%)

24D1044-03 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (146% @ 30-130%)

24D1044-04 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (140% @ 30-130%)

24D1044-05 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (144% @ 30-130%)

24D1044-06 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (133% @ 30-130%)

24D1044-08 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (134% @ 30-130%)

24D1044-09 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (147% @ 30-130%)

24D1044-10 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (160% @ 30-130%)

24D1044-11 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (157% @ 30-130%)

24D1044-12 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (141% @ 30-130%)

24D1044-13 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (144% @ 30-130%)

D4E0020-CCV1 **Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration**

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

2,4-Dimethylphenol (108% @ 80-120%)

D4E0020-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (99% @ 40-160%), Di-n-octylphthalate (115% @ 80-120%)

D4E0020-CCV1 **Initial Calibration Verification recovery is above upper control limit (ICV+).**
2,4-Dimethylphenol

D4E0021-CCV1 **Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration**
2,4-Dimethylphenol (99% @ 80-120%)

D4E0021-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (104% @ 40-160%), Pentachlorophenol (106% @ 40-160%)

D4E0021-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4,6-Tribromophenol (30% @ 20%), 3,3´-Dichlorobenzidine (22% @ 20%), 4-Bromophenyl-phenylether (24% @ 20%), Hexachlorobenzene (30% @ 20%), Hexachlorobutadiene (33% @ 20%)

DD43017-BLK1 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (135% @ 30-130%)

DD43017-BS1 **Blank Spike recovery is above upper control limit (B+).**
2,4-Dimethylphenol (153% @ 30-130%)

DD43017-BSD1 **Blank Spike recovery is above upper control limit (B+).**
2,4-Dimethylphenol (153% @ 30-130%)

DE40104-BS1 **Blank Spike recovery is above upper control limit (B+).**
2,4-Dimethylphenol (130% @ 30-130%)

DE40104-BSD1 **Blank Spike recovery is above upper control limit (B+).**
2,4-Dimethylphenol (132% @ 30-130%)

**Volatile Organics Low Level**

D4E0014-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
1,2-Dichloroethane (28% @ 20%), Dibromomethane (21% @ 20%), Diethyl Ether (24% @ 20%), Methyl tert-Butyl Ether (21% @ 20%), Vinyl Chloride (29% @ 20%)

D4E0068-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
Tetrachloroethene (27% @ 20%)

DE40133-BS1 **Blank Spike recovery is above upper control limit (B+).**
Bromodichloromethane (131% @ 70-130%)

DE40133-BSD1 **Blank Spike recovery is above upper control limit (B+).**
Bromodichloromethane (135% @ 70-130%), Diethyl Ether (133% @ 70-130%)

DE40324-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
1,2-Dibromo-3-Chloropropane (21% @ 20%), Acetone (25% @ 20%)

**No other observations noted.**

**End of Project Narrative.**

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24D1044-01 through 24D1044-18**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| (x) 8260 VOC CAM II A | (x) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| (x) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | (x) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | (x) MassDEP EPH CAM IV B | (x) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes (x) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes ( ) No (x)* |
| | ***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.* | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (x)* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: May 07, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-6
Date Sampled: 04/29/24 09:50
Percent Solids: 92

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **3.29** (0.75) | | 6010D | | 1 | KJB | 05/01/24 14:25 | 2.89 | 100 | DE40108 |
| **Barium** | **13.0** (0.75) | | 6010D | | 1 | KJB | 05/01/24 14:25 | 2.89 | 100 | DE40108 |
| Cadmium | ND (0.38) | | 6010D | | 1 | KJB | 05/01/24 14:25 | 2.89 | 100 | DE40108 |
| **Chromium** | **6.43** (0.75) | | 6010D | | 1 | KJB | 05/01/24 14:25 | 2.89 | 100 | DE40108 |
| **Lead** | **12.8** (3.76) | | 6010D | | 1 | KJB | 05/01/24 14:25 | 2.89 | 100 | DE40108 |
| Mercury | ND (0.031) | | 7471B | | 1 | AFV | 05/01/24 15:50 | 0.7 | 40 | DE40107 |
| Selenium | ND (3.76) | | 6010D | | 1 | KJB | 05/01/24 14:25 | 2.89 | 100 | DE40108 |
| Silver | ND (0.38) | | 6010D | | 1 | KJB | 05/01/24 14:25 | 2.89 | 100 | DE40108 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-6
Date Sampled: 04/29/24 09:50
Percent Solids: 92
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,1,1-Trichloroethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,1,2,2-Tetrachloroethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,1,2-Trichloroethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,1-Dichloroethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,1-Dichloroethene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,1-Dichloropropene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,2,3-Trichlorobenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,2,3-Trichloropropane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,2,4-Trichlorobenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,2,4-Trimethylbenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,2-Dibromoethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,2-Dichlorobenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,2-Dichloroethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,2-Dichloropropane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,3,5-Trimethylbenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,3-Dichlorobenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,3-Dichloropropane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,4-Dichlorobenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 1,4-Dioxane | ND (0.0954) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 2,2-Dichloropropane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 2-Butanone | ND (0.0477) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 2-Chlorotoluene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 2-Hexanone | ND (0.0477) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 4-Chlorotoluene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 4-Isopropyltoluene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| 4-Methyl-2-Pentanone | ND (0.0477) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Acetone | ND (0.0477) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Benzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Bromobenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-6
Date Sampled: 04/29/24 09:50
Percent Solids: 92
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Bromodichloromethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Bromoform | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Bromomethane | ND (0.0095) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Carbon Disulfide | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Carbon Tetrachloride | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Chlorobenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Chloroethane | ND (0.0095) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Chloroform | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Chloromethane | ND (0.0095) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| cis-1,2-Dichloroethene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| cis-1,3-Dichloropropene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Dibromochloromethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Dibromomethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Dichlorodifluoromethane | ND (0.0095) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Diethyl Ether | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Di-isopropyl ether | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Ethyl tertiary-butyl ether | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Ethylbenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Hexachlorobutadiene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Isopropylbenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Methyl tert-Butyl Ether | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Methylene Chloride | ND (0.0238) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Naphthalene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| n-Butylbenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| n-Propylbenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| sec-Butylbenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Styrene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| tert-Butylbenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Tertiary-amyl methyl ether | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Tetrachloroethene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-6
Date Sampled: 04/29/24 09:50
Percent Solids: 92
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0191) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Toluene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| trans-1,2-Dichloroethene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| trans-1,3-Dichloropropene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Trichloroethene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Trichlorofluoromethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Vinyl Chloride | ND (0.0095) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Xylene O | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Xylene P,M | ND (0.0095) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |
| Xylenes (Total) | ND (0.0095) | | 8260D Low | | 1 | MEK | 05/01/24 16:14 | D4E0014 | DE40133 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *116 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *100 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *108 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *96 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-6
Date Sampled: 04/29/24 09:50
Percent Solids: 92
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 1,2,4-Trichlorobenzene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 1,2-Dichlorobenzene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 1,3-Dichlorobenzene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 1,4-Dichlorobenzene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 2,4,5-Trichlorophenol | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 2,4,6-Trichlorophenol | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 2,4-Dichlorophenol | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 2,4-Dimethylphenol | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 2,4-Dinitrophenol | ND (1.12) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 2,4-Dinitrotoluene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 2,6-Dinitrotoluene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 2-Chloronaphthalene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 2-Chlorophenol | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 2-Methylnaphthalene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 2-Methylphenol | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 2-Nitrophenol | ND (0.561) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 3,3´-Dichlorobenzidine | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 3+4-Methylphenol | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 4-Bromophenyl-phenylether | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 4-Chloroaniline | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| 4-Nitrophenol | ND (1.12) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Acenaphthene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Acenaphthylene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Acetophenone | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Aniline | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Anthracene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Azobenzene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Benzo(a)anthracene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Benzo(a)pyrene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Benzo(b)fluoranthene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-6
Date Sampled: 04/29/24 09:50
Percent Solids: 92
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Benzo(k)fluoranthene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| bis(2-Chloroethoxy)methane | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| bis(2-Chloroethyl)ether | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| bis(2-chloroisopropyl)Ether | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| bis(2-Ethylhexyl)phthalate | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Butylbenzylphthalate | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Chrysene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Dibenzo(a,h)Anthracene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Dibenzofuran | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Diethylphthalate | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Dimethylphthalate | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Di-n-butylphthalate | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Di-n-octylphthalate | ND (0.561) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Fluoranthene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Fluorene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Hexachlorobenzene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Hexachlorobutadiene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Hexachloroethane | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Indeno(1,2,3-cd)Pyrene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Isophorone | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Naphthalene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Nitrobenzene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| N-Nitrosodimethylamine | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Pentachlorophenol | ND (1.12) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Phenanthrene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Phenol | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Pyrene | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |
| Pyridine | ND (0.280) | | 8270E | | 1 | TJ | 05/01/24 22:42 | D4E0021 | DD43017 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *101 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-6
Date Sampled: 04/29/24 09:50
Percent Solids: 92
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *141 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *98 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *110 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *97 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *98 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *93 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *121 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-6
Date Sampled: 04/29/24 09:50
Percent Solids: 92
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 11:09 | | DD43003 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 11:09 | | DD43003 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 11:09 | | DD43003 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 11:09 | | DD43003 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 11:09 | | DD43003 |
| Aroclor 1254 [2C] | ND (0.05) | | 8082A | | 1 | 05/02/24 11:09 | | DD43003 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 11:09 | | DD43003 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 11:09 | | DD43003 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 11:09 | | DD43003 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-6
Date Sampled: 04/29/24 09:50
Percent Solids: 92
Initial Volume: 20.1g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 4/30/24 19:18

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| 4,4´-DDE | ND (0.0027) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| 4,4´-DDT | ND (0.0027) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| Aldrin | ND (0.0027) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| alpha-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| alpha-Chlordane | ND (0.0027) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| beta-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| Chlordane (Total) | ND (0.0216) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| delta-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| Dieldrin | ND (0.0027) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| Endosulfan I | ND (0.0027) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| Endosulfan II | ND (0.0027) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| Endosulfan Sulfate | ND (0.0027) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| Endrin | ND (0.0027) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| Endrin Ketone | ND (0.0027) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| gamma-BHC (Lindane) | ND (0.0016) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| gamma-Chlordane | ND (0.0027) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| Heptachlor | ND (0.0027) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| Heptachlor Epoxide | ND (0.0027) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| Hexachlorobenzene | ND (0.0027) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| Methoxychlor | ND (0.0027) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |
| Toxaphene | ND (0.135) | | 8081B | | 1 | 05/01/24 18:10 | D4E0002 | DD43037 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *101 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-6
Date Sampled: 04/29/24 09:50
Percent Solids: 92
Initial Volume: 10.4g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 15:58

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/07/24 0:19 | D4E0111 | DE40248 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/07/24 0:19 | D4E0111 | DE40248 |
| 2,4-D | ND (0.049) | | 8151A | | 1 | 05/07/24 0:19 | D4E0111 | DE40248 |
| 2,4-DB | ND (0.050) | | 8151A | | 1 | 05/07/24 0:19 | D4E0111 | DE40248 |
| Dalapon | ND (0.048) | | 8151A | | 1 | 05/07/24 0:19 | D4E0111 | DE40248 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/07/24 0:19 | D4E0111 | DE40248 |
| Dichlorprop | ND (0.049) | | 8151A | | 1 | 05/07/24 0:19 | D4E0111 | DE40248 |
| Dinoseb | ND (0.050) | | 8151A | | 1 | 05/07/24 0:19 | D4E0111 | DE40248 |
| MCPA | ND (2.43) | | 8151A | | 1 | 05/07/24 0:19 | D4E0111 | DE40248 |
| MCPP | ND (2.46) | | 8151A | | 1 | 05/07/24 0:19 | D4E0111 | DE40248 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *86 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-6
Date Sampled: 04/29/24 09:50
Percent Solids: 92
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 4/30/24 19:08

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (11.0) | | 8100M | | 1 | 05/01/24 18:26 | | DD43005 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *83 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-6
Date Sampled: 04/29/24 09:50
Percent Solids: 92

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-01
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 35** (5) | | 9050A | | 1 | EEM | 05/01/24 13:40 | umhos/cm | DE40128 |
| **Corrosivity (pH)** | **6.53** (N/A) | | 9045 | | 1 | JLK | 04/30/24 19:53 | S.U. | DD43035 |
| **Corrosivity (pH) Sample Temp** | **20.3** | | 2550B | | 1 | JLK | 04/30/24 19:53 | °C | DD43035 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 16:36 | °F | DE40144 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 04/30/24 21:10 | ml/5 min | DD43051 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-2
Date Sampled: 04/29/24 10:10
Percent Solids: 92

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.62** (0.78) | | 6010D | | 1 | KJB | 05/01/24 14:27 | 2.78 | 100 | DE40108 |
| **Barium** | **11.3** (0.78) | | 6010D | | 1 | KJB | 05/01/24 14:27 | 2.78 | 100 | DE40108 |
| Cadmium | ND (0.39) | | 6010D | | 1 | KJB | 05/01/24 14:27 | 2.78 | 100 | DE40108 |
| **Chromium** | **5.07** (0.78) | | 6010D | | 1 | KJB | 05/01/24 14:27 | 2.78 | 100 | DE40108 |
| **Lead** | **6.81** (3.90) | | 6010D | | 1 | KJB | 05/01/24 14:27 | 2.78 | 100 | DE40108 |
| Mercury | ND (0.035) | | 7471B | | 1 | AFV | 05/01/24 15:52 | 0.61 | 40 | DE40107 |
| Selenium | ND (3.90) | | 6010D | | 1 | KJB | 05/01/24 14:27 | 2.78 | 100 | DE40108 |
| Silver | ND (0.39) | | 6010D | | 1 | KJB | 05/01/24 14:27 | 2.78 | 100 | DE40108 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-2
Date Sampled: 04/29/24 10:10
Percent Solids: 92
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,1,1-Trichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,1,2,2-Tetrachloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,1,2-Trichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,1-Dichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,1-Dichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,1-Dichloropropene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,2,3-Trichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,2,3-Trichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,2,4-Trichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,2,4-Trimethylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,2-Dibromoethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,2-Dichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,2-Dichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,2-Dichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,3,5-Trimethylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,3-Dichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,3-Dichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,4-Dichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 1,4-Dioxane | ND (0.0934) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 2,2-Dichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 2-Butanone | ND (0.0467) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 2-Chlorotoluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 2-Hexanone | ND (0.0467) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 4-Chlorotoluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 4-Isopropyltoluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| 4-Methyl-2-Pentanone | ND (0.0467) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Acetone | ND (0.0467) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Benzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Bromobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-2
Date Sampled: 04/29/24 10:10
Percent Solids: 92
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Bromodichloromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Bromoform | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Bromomethane | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Carbon Disulfide | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Carbon Tetrachloride | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Chlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Chloroethane | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Chloroform | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Chloromethane | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| cis-1,2-Dichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| cis-1,3-Dichloropropene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Dibromochloromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Dibromomethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Dichlorodifluoromethane | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Diethyl Ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Di-isopropyl ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Ethyl tertiary-butyl ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Ethylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Hexachlorobutadiene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Isopropylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Methyl tert-Butyl Ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Methylene Chloride | ND (0.0233) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Naphthalene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| n-Butylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| n-Propylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| sec-Butylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Styrene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| tert-Butylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Tertiary-amyl methyl ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Tetrachloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-2
Date Sampled: 04/29/24 10:10
Percent Solids: 92
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0187) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Toluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| trans-1,2-Dichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| trans-1,3-Dichloropropene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Trichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Trichlorofluoromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Vinyl Chloride | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Xylene O | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Xylene P,M | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |
| Xylenes (Total) | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/01/24 16:39 | D4E0014 | DE40133 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *117 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *101 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *108 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *96 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-2
Date Sampled: 04/29/24 10:10
Percent Solids: 92
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 1,2,4-Trichlorobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 1,2-Dichlorobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 1,3-Dichlorobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 1,4-Dichlorobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 2,4,5-Trichlorophenol | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 2,4,6-Trichlorophenol | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 2,4-Dichlorophenol | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 2,4-Dimethylphenol | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 2,4-Dinitrophenol | ND (1.08) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 2,4-Dinitrotoluene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 2,6-Dinitrotoluene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 2-Chloronaphthalene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 2-Chlorophenol | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 2-Methylnaphthalene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 2-Methylphenol | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 2-Nitrophenol | ND (0.542) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 3,3´-Dichlorobenzidine | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 3+4-Methylphenol | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 4-Bromophenyl-phenylether | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 4-Chloroaniline | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| 4-Nitrophenol | ND (1.08) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Acenaphthene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Acenaphthylene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Acetophenone | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Aniline | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Anthracene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Azobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Benzo(a)anthracene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Benzo(a)pyrene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Benzo(b)fluoranthene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-2
Date Sampled: 04/29/24 10:10
Percent Solids: 92
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Benzo(k)fluoranthene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| bis(2-Chloroethoxy)methane | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| bis(2-Chloroethyl)ether | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| bis(2-chloroisopropyl)Ether | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| bis(2-Ethylhexyl)phthalate | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Butylbenzylphthalate | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Chrysene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Dibenzo(a,h)Anthracene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Dibenzofuran | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Diethylphthalate | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Dimethylphthalate | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Di-n-butylphthalate | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Di-n-octylphthalate | ND (0.542) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Fluoranthene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Fluorene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Hexachlorobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Hexachlorobutadiene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Hexachloroethane | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Indeno(1,2,3-cd)Pyrene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Isophorone | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Naphthalene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Nitrobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| N-Nitrosodimethylamine | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Pentachlorophenol | ND (1.08) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Phenanthrene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Phenol | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Pyrene | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |
| Pyridine | ND (0.271) | | 8270E | | 1 | TJ | 05/01/24 23:12 | D4E0021 | DD43017 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *99 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-2
Date Sampled: 04/29/24 10:10
Percent Solids: 92
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *139 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *96 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *108 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *96 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *98 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *93 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *121 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-2
Date Sampled: 04/29/24 10:10
Percent Solids: 92
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 11:29 | | DD43003 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 11:29 | | DD43003 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 11:29 | | DD43003 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 11:29 | | DD43003 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 11:29 | | DD43003 |
| Aroclor 1254 [2C] | ND (0.05) | | 8082A | | 1 | 05/02/24 11:29 | | DD43003 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 11:29 | | DD43003 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 11:29 | | DD43003 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 11:29 | | DD43003 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *86 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-2
Date Sampled: 04/29/24 10:10
Percent Solids: 92
Initial Volume: 19.9g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 4/30/24 19:18

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| 4,4´-DDE | ND (0.0027) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| 4,4´-DDT | ND (0.0027) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| Aldrin | ND (0.0027) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| alpha-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| alpha-Chlordane | ND (0.0027) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| beta-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| Chlordane (Total) | ND (0.0218) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| delta-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| Dieldrin | ND (0.0027) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| Endosulfan I | ND (0.0027) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| Endosulfan II | ND (0.0027) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| Endosulfan Sulfate | ND (0.0027) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| Endrin | ND (0.0027) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| Endrin Ketone | ND (0.0027) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| gamma-BHC (Lindane) | ND (0.0016) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| gamma-Chlordane | ND (0.0027) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| Heptachlor | ND (0.0027) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| Heptachlor Epoxide | ND (0.0027) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| Hexachlorobenzene | ND (0.0027) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| Methoxychlor | ND (0.0027) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |
| Toxaphene | ND (0.136) | | 8081B | | 1 | 05/01/24 14:28 | D4E0002 | DD43037 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *118 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *103 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-2
Date Sampled: 04/29/24 10:10
Percent Solids: 92
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 15:58

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/07/24 0:48 | D4E0111 | DE40248 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/07/24 0:48 | D4E0111 | DE40248 |
| 2,4-D | ND (0.050) | | 8151A | | 1 | 05/07/24 0:48 | D4E0111 | DE40248 |
| 2,4-DB | ND (0.051) | | 8151A | | 1 | 05/07/24 0:48 | D4E0111 | DE40248 |
| Dalapon | ND (0.049) | | 8151A | | 1 | 05/07/24 0:48 | D4E0111 | DE40248 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/07/24 0:48 | D4E0111 | DE40248 |
| Dichlorprop | ND (0.050) | | 8151A | | 1 | 05/07/24 0:48 | D4E0111 | DE40248 |
| Dinoseb | ND (0.051) | | 8151A | | 1 | 05/07/24 0:48 | D4E0111 | DE40248 |
| MCPA | ND (2.49) | | 8151A | | 1 | 05/07/24 0:48 | D4E0111 | DE40248 |
| MCPP | ND (2.52) | | 8151A | | 1 | 05/07/24 0:48 | D4E0111 | DE40248 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *84 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-2
Date Sampled: 04/29/24 10:10
Percent Solids: 92
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 4/30/24 19:08

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (10.6) | | 8100M | | 1 | 05/01/24 19:04 | | DD43005 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *75 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ II-2
Date Sampled: 04/29/24 10:10
Percent Solids: 92

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-02
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 9** (5) | | 9050A | | 1 | EEM | 05/01/24 13:40 | umhos/cm | DE40128 |
| **Corrosivity (pH)** | **6.78** (N/A) | | 9045 | | 1 | JLK | 04/30/24 19:53 | S.U. | DD43035 |
| **Corrosivity (pH) Sample Temp** | **20.4** | | 2550B | | 1 | JLK | 04/30/24 19:53 | °C | DD43035 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 16:36 | °F | DE40144 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 04/30/24 21:10 | ml/5 min | DD43051 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5
Date Sampled: 04/29/24 09:25
Percent Solids: 80

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-03
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **6.55** (0.91) | | 6010D | | 1 | KJB | 05/01/24 14:29 | 2.76 | 100 | DE40108 |
| **Barium** | **86.3** (0.91) | | 6010D | | 1 | KJB | 05/01/24 14:29 | 2.76 | 100 | DE40108 |
| Cadmium | ND (0.45) | | 6010D | | 1 | KJB | 05/01/24 14:29 | 2.76 | 100 | DE40108 |
| **Chromium** | **12.1** (0.91) | | 6010D | | 1 | KJB | 05/01/24 14:29 | 2.76 | 100 | DE40108 |
| **Lead** | **347** (4.54) | | 6010D | | 1 | KJB | 05/01/24 14:29 | 2.76 | 100 | DE40108 |
| **Mercury** | **0.575** (0.037) | | 7471B | | 1 | AFV | 05/01/24 15:54 | 0.67 | 40 | DE40107 |
| Selenium | ND (4.54) | | 6010D | | 1 | KJB | 05/01/24 14:29 | 2.76 | 100 | DE40108 |
| Silver | ND (0.45) | | 6010D | | 1 | KJB | 05/01/24 14:29 | 2.76 | 100 | DE40108 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5
Date Sampled: 04/29/24 09:25
Percent Solids: 80

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-03
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.72** (0.05) | | 1311/6010D | | 1 | KJB | 05/06/24 16:58 | 50 | 50 | DE40325 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5
Date Sampled: 04/29/24 09:25
Percent Solids: 80
Initial Volume: 5.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,1,1-Trichloroethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,1,2,2-Tetrachloroethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,1,2-Trichloroethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,1-Dichloroethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,1-Dichloroethene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,1-Dichloropropene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,2,3-Trichlorobenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,2,3-Trichloropropane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,2,4-Trichlorobenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,2,4-Trimethylbenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,2-Dibromoethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,2-Dichlorobenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,2-Dichloroethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,2-Dichloropropane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,3,5-Trimethylbenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,3-Dichlorobenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,3-Dichloropropane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,4-Dichlorobenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 1,4-Dioxane | ND (0.112) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 2,2-Dichloropropane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 2-Butanone | ND (0.0560) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 2-Chlorotoluene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 2-Hexanone | ND (0.0560) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 4-Chlorotoluene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 4-Isopropyltoluene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| 4-Methyl-2-Pentanone | ND (0.0560) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| **Acetone** | **0.0712** (0.0560) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Benzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Bromobenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5
Date Sampled: 04/29/24 09:25
Percent Solids: 80
Initial Volume: 5.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Bromodichloromethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Bromoform | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Bromomethane | ND (0.0112) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Carbon Disulfide | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Carbon Tetrachloride | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Chlorobenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Chloroethane | ND (0.0112) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Chloroform | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Chloromethane | ND (0.0112) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| cis-1,2-Dichloroethene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| cis-1,3-Dichloropropene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Dibromochloromethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Dibromomethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Dichlorodifluoromethane | ND (0.0112) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Diethyl Ether | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Di-isopropyl ether | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Ethyl tertiary-butyl ether | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Ethylbenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Hexachlorobutadiene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Isopropylbenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Methyl tert-Butyl Ether | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Methylene Chloride | ND (0.0280) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Naphthalene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| n-Butylbenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| n-Propylbenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| sec-Butylbenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Styrene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| tert-Butylbenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Tertiary-amyl methyl ether | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Tetrachloroethene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5
Date Sampled: 04/29/24 09:25
Percent Solids: 80
Initial Volume: 5.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0224) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Toluene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| trans-1,2-Dichloroethene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| trans-1,3-Dichloropropene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Trichloroethene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Trichlorofluoromethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Vinyl Chloride | ND (0.0112) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Xylene O | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Xylene P,M | ND (0.0112) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |
| Xylenes (Total) | ND (0.0112) | | 8260D Low | | 1 | MEK | 05/01/24 17:05 | D4E0014 | DE40133 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *121 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *95 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *110 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *98 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5
Date Sampled: 04/29/24 09:25
Percent Solids: 80
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.031) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 1,2,4-Trichlorobenzene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 1,2-Dichlorobenzene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 1,3-Dichlorobenzene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 1,4-Dichlorobenzene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 2,4,5-Trichlorophenol | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 2,4,6-Trichlorophenol | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 2,4-Dichlorophenol | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 2,4-Dimethylphenol | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 2,4-Dinitrophenol | ND (1.23) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 2,4-Dinitrotoluene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 2,6-Dinitrotoluene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 2-Chloronaphthalene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 2-Chlorophenol | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 2-Methylnaphthalene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 2-Methylphenol | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 2-Nitrophenol | ND (0.614) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 3,3´-Dichlorobenzidine | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 3+4-Methylphenol | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 4-Bromophenyl-phenylether | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 4-Chloroaniline | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| 4-Nitrophenol | ND (1.23) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Acenaphthene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Acenaphthylene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Acetophenone | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Aniline | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Anthracene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Azobenzene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Benzo(a)anthracene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Benzo(a)pyrene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Benzo(b)fluoranthene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5
Date Sampled: 04/29/24 09:25
Percent Solids: 80
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Benzo(k)fluoranthene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| bis(2-Chloroethoxy)methane | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| bis(2-Chloroethyl)ether | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| bis(2-chloroisopropyl)Ether | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| bis(2-Ethylhexyl)phthalate | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Butylbenzylphthalate | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Chrysene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Dibenzo(a,h)Anthracene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Dibenzofuran | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Diethylphthalate | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Dimethylphthalate | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Di-n-butylphthalate | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Di-n-octylphthalate | ND (0.614) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| **Fluoranthene** | **0.424** (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Fluorene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Hexachlorobenzene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Hexachlorobutadiene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Hexachloroethane | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Indeno(1,2,3-cd)Pyrene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Isophorone | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Naphthalene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Nitrobenzene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| N-Nitrosodimethylamine | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Pentachlorophenol | ND (1.23) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Phenanthrene | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Phenol | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| **Pyrene** | **0.402** (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |
| Pyridine | ND (0.307) | | 8270E | | 1 | TJ | 05/01/24 23:42 | D4E0021 | DD43017 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *103 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5
Date Sampled: 04/29/24 09:25
Percent Solids: 80
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *146 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *101 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *112 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *99 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *102 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *97 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *121 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5
Date Sampled: 04/29/24 09:25
Percent Solids: 80
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 05/02/24 11:49 | | DD43003 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 05/02/24 11:49 | | DD43003 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 05/02/24 11:49 | | DD43003 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 05/02/24 11:49 | | DD43003 |
| **Aroclor 1248** | **0.1** (0.06) | | 8082A | | 1 | 05/02/24 11:49 | | DD43003 |
| **Aroclor 1254** | **0.08** (0.06) | | 8082A | | 1 | 05/02/24 11:49 | | DD43003 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 05/02/24 11:49 | | DD43003 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 05/02/24 11:49 | | DD43003 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 05/02/24 11:49 | | DD43003 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *74 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5
Date Sampled: 04/29/24 09:25
Percent Solids: 80
Initial Volume: 20.5g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 4/30/24 19:18

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0031) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| 4,4´-DDE | ND (0.0031) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| 4,4´-DDT | ND (0.0031) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| Aldrin | ND (0.0031) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| alpha-BHC | ND (0.0031) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| alpha-Chlordane | ND (0.0031) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| beta-BHC | ND (0.0031) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| Chlordane (Total) | ND (0.0245) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| delta-BHC | ND (0.0031) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| Dieldrin [2C] | ND (0.0031) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| Endosulfan I | ND (0.0031) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| Endosulfan II | ND (0.0031) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| Endosulfan Sulfate | ND (0.0031) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| Endrin | ND (0.0031) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| Endrin Ketone | ND (0.0031) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| gamma-BHC (Lindane) | ND (0.0018) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| gamma-Chlordane | ND (0.0031) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| Heptachlor | ND (0.0031) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| Heptachlor Epoxide | ND (0.0031) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| Hexachlorobenzene | ND (0.0031) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| Methoxychlor | ND (0.0031) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |
| Toxaphene | ND (0.153) | | 8081B | | 1 | 05/01/24 13:33 | D4E0002 | DD43037 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *104 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5
Date Sampled: 04/29/24 09:25
Percent Solids: 80
Initial Volume: 10.4g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 15:58

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.011) | | 8151A | | 1 | 05/07/24 1:16 | D4E0111 | DE40248 |
| 2,4,5-TP (Silvex) | ND (0.011) | | 8151A | | 1 | 05/07/24 1:16 | D4E0111 | DE40248 |
| **2,4-D** | **0.107** (0.057) | | 8151A | | 1 | 05/07/24 1:16 | D4E0111 | DE40248 |
| 2,4-DB | ND (0.057) | | 8151A | | 1 | 05/07/24 1:16 | D4E0111 | DE40248 |
| Dalapon | ND (0.055) | | 8151A | | 1 | 05/07/24 1:16 | D4E0111 | DE40248 |
| Dicamba | ND (0.011) | | 8151A | | 1 | 05/07/24 1:16 | D4E0111 | DE40248 |
| Dichlorprop | ND (0.057) | | 8151A | | 1 | 05/07/24 1:16 | D4E0111 | DE40248 |
| Dinoseb | ND (0.057) | | 8151A | | 1 | 05/07/24 1:16 | D4E0111 | DE40248 |
| MCPA | ND (2.80) | | 8151A | | 1 | 05/07/24 1:16 | D4E0111 | DE40248 |
| MCPP | ND (2.83) | | 8151A | | 1 | 05/07/24 1:16 | D4E0111 | DE40248 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *92 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5
Date Sampled: 04/29/24 09:25
Percent Solids: 80
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 4/30/24 19:08

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **36.2** (13.1) | | 8100M | | 1 | 05/01/24 19:42 | | DD43005 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *81 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5
Date Sampled: 04/29/24 09:25
Percent Solids: 80

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-03
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 562** (5) | | 9050A | | 1 | EEM | 05/01/24 13:40 | umhos/cm | DE40128 |
| **Corrosivity (pH)** | **6.70** (N/A) | | 9045 | | 1 | JLK | 04/30/24 19:53 | S.U. | DD43035 |
| **Corrosivity (pH) Sample Temp** | **20.4** | | 2550B | | 1 | JLK | 04/30/24 19:53 | °C | DD43035 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 16:36 | °F | DE40144 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 04/30/24 21:10 | ml/5 min | DD43051 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5
Date Sampled: 04/29/24 09:25
Percent Solids: 80
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-03
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/2/24 19:12

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Batch |
|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **19.9** (N/A) | | 1311 | | 1 | RAP | 05/03/24 11:12 | DE40241 |
| **Temperature (Max C)** | **21.3** (N/A) | | 1311 | | 1 | RAP | 05/03/24 11:12 | DE40241 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 ºC.** (N/A) | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-0.5
Date Sampled: 04/29/24 10:30
Percent Solids: 94

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **1.83** (0.73) | | 6010D | | 1 | KJB | 05/01/24 14:36 | 2.9 | 100 | DE40108 |
| **Barium** | **18.4** (0.73) | | 6010D | | 1 | KJB | 05/01/24 14:36 | 2.9 | 100 | DE40108 |
| Cadmium | ND (0.37) | | 6010D | | 1 | KJB | 05/01/24 14:36 | 2.9 | 100 | DE40108 |
| **Chromium** | **3.76** (0.73) | | 6010D | | 1 | KJB | 05/01/24 14:36 | 2.9 | 100 | DE40108 |
| **Lead** | **39.4** (3.66) | | 6010D | | 1 | KJB | 05/01/24 14:36 | 2.9 | 100 | DE40108 |
| **Mercury** | **0.069** (0.031) | | 7471B | | 1 | AFV | 05/01/24 15:56 | 0.67 | 40 | DE40107 |
| Selenium | ND (3.66) | | 6010D | | 1 | KJB | 05/01/24 14:36 | 2.9 | 100 | DE40108 |
| Silver | ND (0.37) | | 6010D | | 1 | KJB | 05/01/24 14:36 | 2.9 | 100 | DE40108 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-0.5
Date Sampled: 04/29/24 10:30
Percent Solids: 94
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,1,1-Trichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,1,2,2-Tetrachloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,1,2-Trichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,1-Dichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,1-Dichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,1-Dichloropropene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,2,3-Trichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,2,3-Trichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,2,4-Trichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,2,4-Trimethylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,2-Dibromoethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,2-Dichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,2-Dichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,2-Dichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,3,5-Trimethylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,3-Dichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,3-Dichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,4-Dichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 1,4-Dioxane | ND (0.0931) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 2,2-Dichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 2-Butanone | ND (0.0465) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 2-Chlorotoluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 2-Hexanone | ND (0.0465) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 4-Chlorotoluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 4-Isopropyltoluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| 4-Methyl-2-Pentanone | ND (0.0465) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Acetone | ND (0.0465) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Benzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Bromobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-0.5
Date Sampled: 04/29/24 10:30
Percent Solids: 94
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Bromodichloromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Bromoform | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Bromomethane | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Carbon Disulfide | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Carbon Tetrachloride | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Chlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Chloroethane | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Chloroform | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Chloromethane | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| cis-1,2-Dichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| cis-1,3-Dichloropropene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Dibromochloromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Dibromomethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Dichlorodifluoromethane | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Diethyl Ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Di-isopropyl ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Ethyl tertiary-butyl ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Ethylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Hexachlorobutadiene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Isopropylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Methyl tert-Butyl Ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Methylene Chloride | ND (0.0233) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Naphthalene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| n-Butylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| n-Propylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| sec-Butylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Styrene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| tert-Butylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Tertiary-amyl methyl ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Tetrachloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-0.5
Date Sampled: 04/29/24 10:30
Percent Solids: 94
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0186) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Toluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| trans-1,2-Dichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| trans-1,3-Dichloropropene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Trichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Trichlorofluoromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Vinyl Chloride | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Xylene O | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Xylene P,M | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |
| Xylenes (Total) | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/01/24 17:31 | D4E0014 | DE40133 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *120 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *98 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *110 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *96 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-0.5
Date Sampled: 04/29/24 10:30
Percent Solids: 94
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 1,2,4-Trichlorobenzene | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 1,2-Dichlorobenzene | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 1,3-Dichlorobenzene | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 1,4-Dichlorobenzene | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 2,4,5-Trichlorophenol | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 2,4,6-Trichlorophenol | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 2,4-Dichlorophenol | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 2,4-Dimethylphenol | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 2,4-Dinitrophenol | ND (1.06) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 2,4-Dinitrotoluene | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 2,6-Dinitrotoluene | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 2-Chloronaphthalene | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 2-Chlorophenol | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 2-Methylnaphthalene | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 2-Methylphenol | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 2-Nitrophenol | ND (0.528) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 3,3´-Dichlorobenzidine | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 3+4-Methylphenol | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 4-Bromophenyl-phenylether | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 4-Chloroaniline | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| 4-Nitrophenol | ND (1.06) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Acenaphthene | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Acenaphthylene | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Acetophenone | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Aniline | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Anthracene | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Azobenzene | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| **Benzo(a)anthracene** | **0.647** (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| **Benzo(a)pyrene** | **0.619** (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| **Benzo(b)fluoranthene** | **0.673** (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-0.5
Date Sampled: 04/29/24 10:30
Percent Solids: 94
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Benzo(g,h,i)perylene** | **0.375** (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Benzo(k)fluoranthene | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| bis(2-Chloroethoxy)methane | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| bis(2-Chloroethyl)ether | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| bis(2-chloroisopropyl)Ether | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| bis(2-Ethylhexyl)phthalate | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Butylbenzylphthalate | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| **Chrysene** | **0.658** (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Dibenzo(a,h)Anthracene | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Dibenzofuran | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Diethylphthalate | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Dimethylphthalate | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Di-n-butylphthalate | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Di-n-octylphthalate | ND (0.528) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| **Fluoranthene** | **1.44** (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Fluorene | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Hexachlorobenzene | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Hexachlorobutadiene | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Hexachloroethane | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| **Indeno(1,2,3-cd)Pyrene** | **0.371** (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Isophorone | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Naphthalene | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Nitrobenzene | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| N-Nitrosodimethylamine | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Pentachlorophenol | ND (1.06) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| **Phenanthrene** | **0.977** (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Phenol | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| **Pyrene** | **1.24** (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |
| Pyridine | ND (0.264) | | 8270E | | 1 | TJ | 05/02/24 0:13 | D4E0021 | DD43017 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *97 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-0.5
Date Sampled: 04/29/24 10:30
Percent Solids: 94
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *140 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *94 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *105 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *91 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *95 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *92 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *117 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-0.5
Date Sampled: 04/29/24 10:30
Percent Solids: 94
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:09 | | DD43003 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:09 | | DD43003 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:09 | | DD43003 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:09 | | DD43003 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:09 | | DD43003 |
| **Aroclor 1254 [2C]** | **1.2** (0.1) | | 8082A | | 2 | 05/02/24 16:07 | | DD43003 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:09 | | DD43003 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:09 | | DD43003 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:09 | | DD43003 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *87 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-0.5
Date Sampled: 04/29/24 10:30
Percent Solids: 94
Initial Volume: 20.2g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 4/30/24 19:18

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0026) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| 4,4´-DDE | ND (0.0026) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| 4,4´-DDT | ND (0.0026) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| Aldrin | ND (0.0026) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| alpha-BHC [2C] | ND (0.0026) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| alpha-Chlordane | ND (0.0026) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| beta-BHC | ND (0.0026) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| Chlordane (Total) | ND (0.0210) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| delta-BHC | ND (0.0026) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| **Dieldrin** | **P, LC 0.0366** (0.0131) | | 8081B | | 5 | 05/02/24 10:51 | D4E0002 | DD43037 |
| Endosulfan I | ND (0.0026) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| **Endosulfan II** | **P, LC 0.0090** (0.0026) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| Endosulfan Sulfate | ND (0.0026) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| Endrin | ND (0.0026) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| Endrin Ketone | ND (0.0026) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| gamma-BHC (Lindane) | ND (0.0016) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| gamma-Chlordane | ND (0.0026) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| Heptachlor | ND (0.0026) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| Heptachlor Epoxide | ND (0.0026) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| Hexachlorobenzene | ND (0.0026) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| Methoxychlor | ND (0.0026) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |
| Toxaphene | ND (0.131) | | 8081B | | 1 | 05/01/24 18:37 | D4E0002 | DD43037 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *116 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-0.5
Date Sampled: 04/29/24 10:30
Percent Solids: 94
Initial Volume: 10.5g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 15:58

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/07/24 1:45 | D4E0111 | DE40248 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/07/24 1:45 | D4E0111 | DE40248 |
| 2,4-D | ND (0.047) | | 8151A | | 1 | 05/07/24 1:45 | D4E0111 | DE40248 |
| 2,4-DB | ND (0.048) | | 8151A | | 1 | 05/07/24 1:45 | D4E0111 | DE40248 |
| Dalapon | ND (0.046) | | 8151A | | 1 | 05/07/24 1:45 | D4E0111 | DE40248 |
| Dicamba | ND (0.009) | | 8151A | | 1 | 05/07/24 1:45 | D4E0111 | DE40248 |
| Dichlorprop | ND (0.047) | | 8151A | | 1 | 05/07/24 1:45 | D4E0111 | DE40248 |
| Dinoseb | ND (0.048) | | 8151A | | 1 | 05/07/24 1:45 | D4E0111 | DE40248 |
| MCPA | ND (2.35) | | 8151A | | 1 | 05/07/24 1:45 | D4E0111 | DE40248 |
| MCPP | ND (2.37) | | 8151A | | 1 | 05/07/24 1:45 | D4E0111 | DE40248 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-0.5
Date Sampled: 04/29/24 10:30
Percent Solids: 94
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 4/30/24 19:08

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **32.0** (10.5) | | 8100M | | 1 | 05/01/24 20:21 | | DD43005 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *77 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-0.5
Date Sampled: 04/29/24 10:30
Percent Solids: 94

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-04
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 30** (5) | | 9050A | | 1 | EEM | 05/01/24 13:40 | umhos/cm | DE40128 |
| **Corrosivity (pH)** | **7.10** (N/A) | | 9045 | | 1 | JLK | 04/30/24 19:53 | S.U. | DD43035 |
| **Corrosivity (pH) Sample Temp** | **20.4** | | 2550B | | 1 | JLK | 04/30/24 19:53 | °C | DD43035 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 16:36 | °F | DE40144 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 04/30/24 21:16 | ml/5 min | DD43051 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-7
Date Sampled: 04/29/24 11:35
Percent Solids: 91

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-05
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **3.24** (0.85) | | 6010D | | 1 | KJB | 05/01/24 14:42 | 2.6 | 100 | DE40108 |
| **Barium** | **19.4** (0.85) | | 6010D | | 1 | KJB | 05/01/24 14:42 | 2.6 | 100 | DE40108 |
| Cadmium | ND (0.42) | | 6010D | | 1 | KJB | 05/01/24 14:42 | 2.6 | 100 | DE40108 |
| **Chromium** | **5.41** (0.85) | | 6010D | | 1 | KJB | 05/01/24 14:42 | 2.6 | 100 | DE40108 |
| **Lead** | **53.6** (4.23) | | 6010D | | 1 | KJB | 05/01/24 14:42 | 2.6 | 100 | DE40108 |
| **Mercury** | **0.125** (0.034) | | 7471B | | 1 | AFV | 05/01/24 15:58 | 0.64 | 40 | DE40107 |
| Selenium | ND (4.23) | | 6010D | | 1 | KJB | 05/01/24 14:42 | 2.6 | 100 | DE40108 |
| Silver | ND (0.42) | | 6010D | | 1 | KJB | 05/01/24 14:42 | 2.6 | 100 | DE40108 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-7
Date Sampled: 04/29/24 11:35
Percent Solids: 91
Initial Volume: 4.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,1,1-Trichloroethane | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,1,2,2-Tetrachloroethane | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,1,2-Trichloroethane | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,1-Dichloroethane | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,1-Dichloroethene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,1-Dichloropropene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,2,3-Trichlorobenzene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,2,3-Trichloropropane | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,2,4-Trichlorobenzene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,2,4-Trimethylbenzene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,2-Dibromoethane | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,2-Dichlorobenzene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,2-Dichloroethane | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,2-Dichloropropane | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,3,5-Trimethylbenzene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,3-Dichlorobenzene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,3-Dichloropropane | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,4-Dichlorobenzene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 1,4-Dioxane | ND (0.125) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 2,2-Dichloropropane | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 2-Butanone | ND (0.0625) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 2-Chlorotoluene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 2-Hexanone | ND (0.0625) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 4-Chlorotoluene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 4-Isopropyltoluene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| 4-Methyl-2-Pentanone | ND (0.0625) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Acetone | ND (0.0625) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Benzene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Bromobenzene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-7
Date Sampled: 04/29/24 11:35
Percent Solids: 91
Initial Volume: 4.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Bromodichloromethane | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Bromoform | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Bromomethane | ND (0.0125) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Carbon Disulfide | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Carbon Tetrachloride | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Chlorobenzene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Chloroethane | ND (0.0125) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Chloroform | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Chloromethane | ND (0.0125) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| cis-1,2-Dichloroethene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| cis-1,3-Dichloropropene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Dibromochloromethane | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Dibromomethane | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Dichlorodifluoromethane | ND (0.0125) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Diethyl Ether | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Di-isopropyl ether | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Ethyl tertiary-butyl ether | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Ethylbenzene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Hexachlorobutadiene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Isopropylbenzene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Methyl tert-Butyl Ether | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Methylene Chloride | ND (0.0312) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Naphthalene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| n-Butylbenzene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| n-Propylbenzene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| sec-Butylbenzene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Styrene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| tert-Butylbenzene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Tertiary-amyl methyl ether | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Tetrachloroethene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-7
Date Sampled: 04/29/24 11:35
Percent Solids: 91
Initial Volume: 4.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0250) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Toluene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| trans-1,2-Dichloroethene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| trans-1,3-Dichloropropene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Trichloroethene | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Trichlorofluoromethane | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Vinyl Chloride | ND (0.0125) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Xylene O | ND (0.0062) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Xylene P,M | ND (0.0125) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |
| Xylenes (Total) | ND (0.0125) | | 8260D Low | | 1 | MEK | 05/01/24 17:56 | D4E0014 | DE40133 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *119 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *98 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *110 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *96 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-7
Date Sampled: 04/29/24 11:35
Percent Solids: 91
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 1,2,4-Trichlorobenzene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 1,2-Dichlorobenzene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 1,3-Dichlorobenzene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 1,4-Dichlorobenzene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 2,4,5-Trichlorophenol | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 2,4,6-Trichlorophenol | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 2,4-Dichlorophenol | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 2,4-Dimethylphenol | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 2,4-Dinitrophenol | ND (1.14) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 2,4-Dinitrotoluene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 2,6-Dinitrotoluene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 2-Chloronaphthalene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 2-Chlorophenol | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 2-Methylnaphthalene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 2-Methylphenol | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 2-Nitrophenol | ND (0.570) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 3,3´-Dichlorobenzidine | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 3+4-Methylphenol | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 4-Bromophenyl-phenylether | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 4-Chloroaniline | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| 4-Nitrophenol | ND (1.14) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Acenaphthene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Acenaphthylene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Acetophenone | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Aniline | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Anthracene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Azobenzene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Benzo(a)anthracene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Benzo(a)pyrene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Benzo(b)fluoranthene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-7
Date Sampled: 04/29/24 11:35
Percent Solids: 91
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Benzo(k)fluoranthene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| bis(2-Chloroethoxy)methane | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| bis(2-Chloroethyl)ether | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| bis(2-chloroisopropyl)Ether | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| **bis(2-Ethylhexyl)phthalate** | **0.527** (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| **Butylbenzylphthalate** | **1.32** (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Chrysene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Dibenzo(a,h)Anthracene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Dibenzofuran | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Diethylphthalate | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Dimethylphthalate | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Di-n-butylphthalate | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| **Di-n-octylphthalate** | **1.03** (0.570) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Fluoranthene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Fluorene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Hexachlorobenzene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Hexachlorobutadiene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Hexachloroethane | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Indeno(1,2,3-cd)Pyrene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Isophorone | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Naphthalene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Nitrobenzene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| N-Nitrosodimethylamine | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Pentachlorophenol | ND (1.14) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Phenanthrene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Phenol | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Pyrene | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |
| Pyridine | ND (0.285) | | 8270E | | 1 | TJ | 05/02/24 0:43 | D4E0021 | DD43017 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *96 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-7
Date Sampled: 04/29/24 11:35
Percent Solids: 91
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *144 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *97 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *108 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *95 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *96 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *93 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *118 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-7
Date Sampled: 04/29/24 11:35
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:29 | | DD43003 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:29 | | DD43003 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:29 | | DD43003 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:29 | | DD43003 |
| **Aroclor 1248 [2C]** | **0.07** (0.05) | | 8082A | | 1 | 05/02/24 12:29 | | DD43003 |
| **Aroclor 1254** | **0.09** (0.05) | | 8082A | | 1 | 05/02/24 12:29 | | DD43003 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:29 | | DD43003 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:29 | | DD43003 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:29 | | DD43003 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *72 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-7
Date Sampled: 04/29/24 11:35
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 4/30/24 19:18

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| 4,4´-DDE | ND (0.0027) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| 4,4´-DDT | ND (0.0027) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| Aldrin | ND (0.0027) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| alpha-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| alpha-Chlordane | ND (0.0027) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| beta-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| Chlordane (Total) | ND (0.0215) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| delta-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| Dieldrin | ND (0.0027) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| Endosulfan I | ND (0.0027) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| Endosulfan II | ND (0.0027) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| Endosulfan Sulfate | ND (0.0027) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| Endrin | ND (0.0027) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| Endrin Ketone | ND (0.0027) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| gamma-BHC (Lindane) | ND (0.0016) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| gamma-Chlordane | ND (0.0027) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| Heptachlor | ND (0.0027) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| Heptachlor Epoxide | ND (0.0027) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| Hexachlorobenzene | ND (0.0027) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| Methoxychlor | ND (0.0027) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |
| Toxaphene | ND (0.134) | | 8081B | | 1 | 05/01/24 19:05 | D4E0002 | DD43037 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *108 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *101 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-7
Date Sampled: 04/29/24 11:35
Percent Solids: 91
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 15:58

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/07/24 2:14 | D4E0111 | DE40248 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/07/24 2:14 | D4E0111 | DE40248 |
| 2,4-D | ND (0.051) | | 8151A | | 1 | 05/07/24 2:14 | D4E0111 | DE40248 |
| 2,4-DB | ND (0.051) | | 8151A | | 1 | 05/07/24 2:14 | D4E0111 | DE40248 |
| Dalapon | ND (0.049) | | 8151A | | 1 | 05/07/24 2:14 | D4E0111 | DE40248 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/07/24 2:14 | D4E0111 | DE40248 |
| Dichlorprop | ND (0.051) | | 8151A | | 1 | 05/07/24 2:14 | D4E0111 | DE40248 |
| Dinoseb | ND (0.051) | | 8151A | | 1 | 05/07/24 2:14 | D4E0111 | DE40248 |
| MCPA | ND (2.51) | | 8151A | | 1 | 05/07/24 2:14 | D4E0111 | DE40248 |
| MCPP | ND (2.53) | | 8151A | | 1 | 05/07/24 2:14 | D4E0111 | DE40248 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *86 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-7
Date Sampled: 04/29/24 11:35
Percent Solids: 91
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/1/24 10:50

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **15.5** (11.6) | | 8100M | | 1 | 05/01/24 20:59 | | DE40105 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *72 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-7
Date Sampled: 04/29/24 11:35
Percent Solids: 91

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-05
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 68** (5) | | 9050A | | 1 | EEM | 05/01/24 13:40 | umhos/cm | DE40128 |
| **Corrosivity (pH)** | **7.00** (N/A) | | 9045 | | 1 | JLK | 04/30/24 19:53 | S.U. | DD43035 |
| **Corrosivity (pH) Sample Temp** | **20.5** | | 2550B | | 1 | JLK | 04/30/24 19:53 | °C | DD43035 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 16:36 | °F | DE40144 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 04/30/24 21:16 | ml/5 min | DD43051 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-5
Date Sampled: 04/29/24 10:00
Percent Solids: 90

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-06
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **1.80** (0.82) | | 6010D | | 1 | KJB | 05/01/24 14:48 | 2.7 | 100 | DE40108 |
| **Barium** | **8.93** (0.82) | | 6010D | | 1 | KJB | 05/01/24 14:48 | 2.7 | 100 | DE40108 |
| Cadmium | ND (0.41) | | 6010D | | 1 | KJB | 05/01/24 14:48 | 2.7 | 100 | DE40108 |
| **Chromium** | **3.90** (0.82) | | 6010D | | 1 | KJB | 05/01/24 14:48 | 2.7 | 100 | DE40108 |
| Lead | ND (4.12) | | 6010D | | 1 | KJB | 05/01/24 14:48 | 2.7 | 100 | DE40108 |
| Mercury | ND (0.034) | | 7471B | | 1 | AFV | 05/01/24 16:00 | 0.65 | 40 | DE40107 |
| Selenium | ND (4.12) | | 6010D | | 1 | KJB | 05/01/24 14:48 | 2.7 | 100 | DE40108 |
| Silver | ND (0.41) | | 6010D | | 1 | KJB | 05/01/24 14:48 | 2.7 | 100 | DE40108 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-5
Date Sampled: 04/29/24 10:00
Percent Solids: 90
Initial Volume: 6.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,1,1-Trichloroethane | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,1,2,2-Tetrachloroethane | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,1,2-Trichloroethane | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,1-Dichloroethane | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,1-Dichloroethene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,1-Dichloropropene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,2,3-Trichlorobenzene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,2,3-Trichloropropane | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,2,4-Trichlorobenzene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,2,4-Trimethylbenzene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,2-Dibromoethane | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,2-Dichlorobenzene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,2-Dichloroethane | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,2-Dichloropropane | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,3,5-Trimethylbenzene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,3-Dichlorobenzene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,3-Dichloropropane | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,4-Dichlorobenzene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 1,4-Dioxane | ND (0.0855) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 2,2-Dichloropropane | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 2-Butanone | ND (0.0427) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 2-Chlorotoluene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 2-Hexanone | ND (0.0427) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 4-Chlorotoluene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 4-Isopropyltoluene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| 4-Methyl-2-Pentanone | ND (0.0427) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Acetone | ND (0.0427) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Benzene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Bromobenzene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-5
Date Sampled: 04/29/24 10:00
Percent Solids: 90
Initial Volume: 6.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Bromodichloromethane | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Bromoform | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Bromomethane | ND (0.0085) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Carbon Disulfide | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Carbon Tetrachloride | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Chlorobenzene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Chloroethane | ND (0.0085) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Chloroform | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Chloromethane | ND (0.0085) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| cis-1,2-Dichloroethene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| cis-1,3-Dichloropropene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Dibromochloromethane | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Dibromomethane | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Dichlorodifluoromethane | ND (0.0085) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Diethyl Ether | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Di-isopropyl ether | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Ethyl tertiary-butyl ether | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Ethylbenzene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Hexachlorobutadiene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Isopropylbenzene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Methyl tert-Butyl Ether | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Methylene Chloride | ND (0.0214) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Naphthalene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| n-Butylbenzene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| n-Propylbenzene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| sec-Butylbenzene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Styrene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| tert-Butylbenzene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Tertiary-amyl methyl ether | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Tetrachloroethene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-5
Date Sampled: 04/29/24 10:00
Percent Solids: 90
Initial Volume: 6.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0171) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Toluene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| trans-1,2-Dichloroethene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| trans-1,3-Dichloropropene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Trichloroethene | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Trichlorofluoromethane | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Vinyl Chloride | ND (0.0085) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Xylene O | ND (0.0043) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Xylene P,M | ND (0.0085) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |
| Xylenes (Total) | ND (0.0085) | | 8260D Low | | 1 | MEK | 05/01/24 18:22 | D4E0014 | DE40133 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *120 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *100 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *109 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *95 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-5
Date Sampled: 04/29/24 10:00
Percent Solids: 90
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 1,2,4-Trichlorobenzene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 1,2-Dichlorobenzene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 1,3-Dichlorobenzene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 1,4-Dichlorobenzene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 2,4,5-Trichlorophenol | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 2,4,6-Trichlorophenol | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 2,4-Dichlorophenol | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 2,4-Dimethylphenol | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 2,4-Dinitrophenol | ND (1.11) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 2,4-Dinitrotoluene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 2,6-Dinitrotoluene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 2-Chloronaphthalene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 2-Chlorophenol | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 2-Methylnaphthalene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 2-Methylphenol | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 2-Nitrophenol | ND (0.553) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 3,3´-Dichlorobenzidine | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 3+4-Methylphenol | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 4-Bromophenyl-phenylether | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 4-Chloroaniline | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| 4-Nitrophenol | ND (1.11) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Acenaphthene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Acenaphthylene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Acetophenone | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Aniline | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Anthracene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Azobenzene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Benzo(a)anthracene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Benzo(a)pyrene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Benzo(b)fluoranthene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-5
Date Sampled: 04/29/24 10:00
Percent Solids: 90
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Benzo(k)fluoranthene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| bis(2-Chloroethoxy)methane | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| bis(2-Chloroethyl)ether | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| bis(2-chloroisopropyl)Ether | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| bis(2-Ethylhexyl)phthalate | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Butylbenzylphthalate | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Chrysene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Dibenzo(a,h)Anthracene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Dibenzofuran | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Diethylphthalate | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Dimethylphthalate | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Di-n-butylphthalate | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Di-n-octylphthalate | ND (0.553) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Fluoranthene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Fluorene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Hexachlorobenzene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Hexachlorobutadiene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Hexachloroethane | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Indeno(1,2,3-cd)Pyrene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Isophorone | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Naphthalene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Nitrobenzene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| N-Nitrosodimethylamine | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Pentachlorophenol | ND (1.11) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Phenanthrene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Phenol | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Pyrene | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |
| Pyridine | ND (0.276) | | 8270E | | 1 | TJ | 05/02/24 1:13 | D4E0021 | DD43017 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *96 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-5
Date Sampled: 04/29/24 10:00
Percent Solids: 90
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *133 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *94 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *103 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *94 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *93 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *90 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *114 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-5
Date Sampled: 04/29/24 10:00
Percent Solids: 90
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 05/02/24 12:49 | | DD43003 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 05/02/24 12:49 | | DD43003 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 05/02/24 12:49 | | DD43003 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 05/02/24 12:49 | | DD43003 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 05/02/24 12:49 | | DD43003 |
| Aroclor 1254 | ND (0.06) | | 8082A | | 1 | 05/02/24 12:49 | | DD43003 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 05/02/24 12:49 | | DD43003 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 05/02/24 12:49 | | DD43003 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 05/02/24 12:49 | | DD43003 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *78 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-5
Date Sampled: 04/29/24 10:00
Percent Solids: 90
Initial Volume: 20g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 4/30/24 19:18

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0028) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| 4,4´-DDE | ND (0.0028) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| 4,4´-DDT | ND (0.0028) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| Aldrin | ND (0.0028) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| alpha-BHC | ND (0.0028) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| alpha-Chlordane | ND (0.0028) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| beta-BHC | ND (0.0028) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| Chlordane (Total) | ND (0.0222) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| delta-BHC | ND (0.0028) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| Dieldrin | ND (0.0028) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| Endosulfan I | ND (0.0028) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| Endosulfan II | ND (0.0028) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| Endosulfan Sulfate | ND (0.0028) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| Endrin | ND (0.0028) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| Endrin Ketone | ND (0.0028) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| gamma-BHC (Lindane) | ND (0.0017) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| gamma-Chlordane | ND (0.0028) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| Heptachlor | ND (0.0028) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| Heptachlor Epoxide | ND (0.0028) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| Hexachlorobenzene | ND (0.0028) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| Methoxychlor | ND (0.0028) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |
| Toxaphene | ND (0.139) | | 8081B | | 1 | 05/01/24 19:33 | D4E0002 | DD43037 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *87 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-5
Date Sampled: 04/29/24 10:00
Percent Solids: 90
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 15:58

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/07/24 2:42 | D4E0111 | DE40248 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/07/24 2:42 | D4E0111 | DE40248 |
| 2,4-D | ND (0.051) | | 8151A | | 1 | 05/07/24 2:42 | D4E0111 | DE40248 |
| 2,4-DB | ND (0.051) | | 8151A | | 1 | 05/07/24 2:42 | D4E0111 | DE40248 |
| Dalapon | ND (0.049) | | 8151A | | 1 | 05/07/24 2:42 | D4E0111 | DE40248 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/07/24 2:42 | D4E0111 | DE40248 |
| Dichlorprop | ND (0.051) | | 8151A | | 1 | 05/07/24 2:42 | D4E0111 | DE40248 |
| Dinoseb | ND (0.051) | | 8151A | | 1 | 05/07/24 2:42 | D4E0111 | DE40248 |
| MCPA | ND (2.51) | | 8151A | | 1 | 05/07/24 2:42 | D4E0111 | DE40248 |
| MCPP | ND (2.54) | | 8151A | | 1 | 05/07/24 2:42 | D4E0111 | DE40248 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *84 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-5
Date Sampled: 04/29/24 10:00
Percent Solids: 90
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/1/24 10:50

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (10.6) | | 8100M | | 1 | 05/01/24 21:37 | | DE40105 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *69 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-5
Date Sampled: 04/29/24 10:00
Percent Solids: 90

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-06
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 9** (5) | | 9050A | | 1 | EEM | 05/01/24 13:40 | umhos/cm | DE40128 |
| **Corrosivity (pH)** | **6.42** (N/A) | | 9045 | | 1 | JLK | 04/30/24 19:53 | S.U. | DD43035 |
| **Corrosivity (pH) Sample Temp** | **20.6** | | 2550B | | 1 | JLK | 04/30/24 19:53 | °C | DD43035 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 16:36 | °F | DE40144 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 04/30/24 21:16 | ml/5 min | DD43051 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-1
Date Sampled: 04/29/24 10:20
Percent Solids: 91

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-08
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.83** (0.77) | | 6010D | | 1 | KJB | 05/01/24 14:50 | 2.87 | 100 | DE40108 |
| **Barium** | **21.9** (0.77) | | 6010D | | 1 | KJB | 05/01/24 14:50 | 2.87 | 100 | DE40108 |
| Cadmium | ND (0.38) | | 6010D | | 1 | KJB | 05/01/24 14:50 | 2.87 | 100 | DE40108 |
| **Chromium** | **7.16** (0.77) | | 6010D | | 1 | KJB | 05/01/24 14:50 | 2.87 | 100 | DE40108 |
| **Lead** | **86.2** (3.84) | | 6010D | | 1 | KJB | 05/01/24 14:50 | 2.87 | 100 | DE40108 |
| **Mercury** | **0.054** (0.034) | | 7471B | | 1 | AFV | 05/01/24 16:02 | 0.65 | 40 | DE40107 |
| Selenium | ND (3.84) | | 6010D | | 1 | KJB | 05/01/24 14:50 | 2.87 | 100 | DE40108 |
| Silver | ND (0.38) | | 6010D | | 1 | KJB | 05/01/24 14:50 | 2.87 | 100 | DE40108 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-1
Date Sampled: 04/29/24 10:20
Percent Solids: 91
Initial Volume: 6.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,1,1-Trichloroethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,1,2,2-Tetrachloroethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,1,2-Trichloroethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,1-Dichloroethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,1-Dichloroethene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,1-Dichloropropene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,2,3-Trichlorobenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,2,3-Trichloropropane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,2,4-Trichlorobenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,2,4-Trimethylbenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,2-Dibromoethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,2-Dichlorobenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,2-Dichloroethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,2-Dichloropropane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,3,5-Trimethylbenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,3-Dichlorobenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,3-Dichloropropane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,4-Dichlorobenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 1,4-Dioxane | ND (0.0874) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 2,2-Dichloropropane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 2-Butanone | ND (0.0437) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 2-Chlorotoluene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 2-Hexanone | ND (0.0437) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 4-Chlorotoluene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 4-Isopropyltoluene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| 4-Methyl-2-Pentanone | ND (0.0437) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Acetone | ND (0.0437) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Benzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Bromobenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-1
Date Sampled: 04/29/24 10:20
Percent Solids: 91
Initial Volume: 6.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Bromodichloromethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Bromoform | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Bromomethane | ND (0.0087) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Carbon Disulfide | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Carbon Tetrachloride | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Chlorobenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Chloroethane | ND (0.0087) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Chloroform | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Chloromethane | ND (0.0087) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| cis-1,2-Dichloroethene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| cis-1,3-Dichloropropene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Dibromochloromethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Dibromomethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Dichlorodifluoromethane | ND (0.0087) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Diethyl Ether | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Di-isopropyl ether | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Ethyl tertiary-butyl ether | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Ethylbenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Hexachlorobutadiene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Isopropylbenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Methyl tert-Butyl Ether | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Methylene Chloride | ND (0.0219) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Naphthalene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| n-Butylbenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| n-Propylbenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| sec-Butylbenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Styrene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| tert-Butylbenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Tertiary-amyl methyl ether | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Tetrachloroethene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-1
Date Sampled: 04/29/24 10:20
Percent Solids: 91
Initial Volume: 6.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0175) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Toluene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| trans-1,2-Dichloroethene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| trans-1,3-Dichloropropene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Trichloroethene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Trichlorofluoromethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Vinyl Chloride | ND (0.0087) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Xylene O | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Xylene P,M | ND (0.0087) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |
| Xylenes (Total) | ND (0.0087) | | 8260D Low | | 1 | MEK | 05/01/24 18:47 | D4E0014 | DE40133 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *123 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *99 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *112 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *96 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-1
Date Sampled: 04/29/24 10:20
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 1,2,4-Trichlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 1,2-Dichlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 1,3-Dichlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 1,4-Dichlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 2,4,5-Trichlorophenol | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 2,4,6-Trichlorophenol | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 2,4-Dichlorophenol | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 2,4-Dimethylphenol | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 2,4-Dinitrophenol | ND (1.11) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 2,4-Dinitrotoluene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 2,6-Dinitrotoluene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 2-Chloronaphthalene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 2-Chlorophenol | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 2-Methylnaphthalene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 2-Methylphenol | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 2-Nitrophenol | ND (0.556) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 3,3´-Dichlorobenzidine | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 3+4-Methylphenol | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 4-Bromophenyl-phenylether | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 4-Chloroaniline | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| 4-Nitrophenol | ND (1.11) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Acenaphthene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Acenaphthylene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Acetophenone | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Aniline | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Anthracene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Azobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Benzo(a)anthracene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Benzo(a)pyrene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Benzo(b)fluoranthene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-1
Date Sampled: 04/29/24 10:20
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Benzo(k)fluoranthene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| bis(2-Chloroethoxy)methane | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| bis(2-Chloroethyl)ether | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| bis(2-chloroisopropyl)Ether | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| bis(2-Ethylhexyl)phthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Butylbenzylphthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Chrysene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Dibenzo(a,h)Anthracene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Dibenzofuran | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Diethylphthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Dimethylphthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Di-n-butylphthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Di-n-octylphthalate | ND (0.556) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| **Fluoranthene** | **0.385** (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Fluorene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Hexachlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Hexachlorobutadiene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Hexachloroethane | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Indeno(1,2,3-cd)Pyrene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Isophorone | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Naphthalene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Nitrobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| N-Nitrosodimethylamine | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Pentachlorophenol | ND (1.11) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Phenanthrene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Phenol | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| **Pyrene** | **0.326** (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |
| Pyridine | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 1:43 | D4E0021 | DD43017 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *97 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-1
Date Sampled: 04/29/24 10:20
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *134 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *95 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *108 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *93 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *95 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *94 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *116 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-1
Date Sampled: 04/29/24 10:20
Percent Solids: 91
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:08 | | DD43003 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:08 | | DD43003 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:08 | | DD43003 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:08 | | DD43003 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:08 | | DD43003 |
| **Aroclor 1254 [2C]** | **0.5** (0.05) | | 8082A | | 1 | 05/02/24 13:08 | | DD43003 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:08 | | DD43003 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:08 | | DD43003 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:08 | | DD43003 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *64 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-1
Date Sampled: 04/29/24 10:20
Percent Solids: 91
Initial Volume: 20.1g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 4/30/24 19:18

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| 4,4´-DDE | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| 4,4´-DDT | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| Aldrin | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| alpha-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| alpha-Chlordane [2C] | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| beta-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| Chlordane (Total) | ND (0.0219) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| delta-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| Dieldrin [2C] | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| Endosulfan I | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| **Endosulfan II** | **P, LC 0.0037** (0.0027) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| Endosulfan Sulfate | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| Endrin | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| Endrin Ketone | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| gamma-BHC (Lindane) | ND (0.0016) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| gamma-Chlordane | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| Heptachlor | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| Heptachlor Epoxide | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| Hexachlorobenzene | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| Methoxychlor | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |
| Toxaphene | ND (0.137) | | 8081B | | 1 | 05/01/24 20:00 | D4E0002 | DD43037 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *96 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *88 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-1
Date Sampled: 04/29/24 10:20
Percent Solids: 91
Initial Volume: 10.5g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 15:58

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/07/24 3:11 | D4E0111 | DE40248 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/07/24 3:11 | D4E0111 | DE40248 |
| 2,4-D | ND (0.049) | | 8151A | | 1 | 05/07/24 3:11 | D4E0111 | DE40248 |
| 2,4-DB | ND (0.050) | | 8151A | | 1 | 05/07/24 3:11 | D4E0111 | DE40248 |
| Dalapon | ND (0.048) | | 8151A | | 1 | 05/07/24 3:11 | D4E0111 | DE40248 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/07/24 3:11 | D4E0111 | DE40248 |
| Dichlorprop | ND (0.049) | | 8151A | | 1 | 05/07/24 3:11 | D4E0111 | DE40248 |
| Dinoseb | ND (0.050) | | 8151A | | 1 | 05/07/24 3:11 | D4E0111 | DE40248 |
| MCPA | ND (2.44) | | 8151A | | 1 | 05/07/24 3:11 | D4E0111 | DE40248 |
| MCPP | ND (2.46) | | 8151A | | 1 | 05/07/24 3:11 | D4E0111 | DE40248 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *90 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-1
Date Sampled: 04/29/24 10:20
Percent Solids: 91
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/1/24 10:50

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **298** (11.2) | | 8100M | | 1 | 05/02/24 18:37 | | DE40105 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *70 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-1
Date Sampled: 04/29/24 10:20
Percent Solids: 91

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-08
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 50** (5) | | 9050A | | 1 | EEM | 05/01/24 13:40 | umhos/cm | DE40128 |
| **Corrosivity (pH)** | **5.80** (N/A) | | 9045 | | 1 | JLK | 04/30/24 19:53 | S.U. | DD43035 |
| **Corrosivity (pH) Sample Temp** | **20.5** | | 2550B | | 1 | JLK | 04/30/24 19:53 | °C | DD43035 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 16:36 | °F | DE40144 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 04/30/24 21:22 | ml/5 min | DD43051 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-7
Date Sampled: 04/29/24 11:25
Percent Solids: 87

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-09
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.41** (0.85) | | 6010D | | 1 | KJB | 05/01/24 14:53 | 2.7 | 100 | DE40108 |
| **Barium** | **20.7** (0.85) | | 6010D | | 1 | KJB | 05/01/24 14:53 | 2.7 | 100 | DE40108 |
| Cadmium | ND (0.43) | | 6010D | | 1 | KJB | 05/01/24 14:53 | 2.7 | 100 | DE40108 |
| **Chromium** | **9.44** (0.85) | | 6010D | | 1 | KJB | 05/01/24 14:53 | 2.7 | 100 | DE40108 |
| **Lead** | **61.3** (4.27) | | 6010D | | 1 | KJB | 05/01/24 14:53 | 2.7 | 100 | DE40108 |
| **Mercury** | **0.048** (0.036) | | 7471B | | 1 | AFV | 05/01/24 16:09 | 0.63 | 40 | DE40107 |
| Selenium | ND (4.27) | | 6010D | | 1 | KJB | 05/01/24 14:53 | 2.7 | 100 | DE40108 |
| Silver | ND (0.43) | | 6010D | | 1 | KJB | 05/01/24 14:53 | 2.7 | 100 | DE40108 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-7
Date Sampled: 04/29/24 11:25
Percent Solids: 87
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,1,1-Trichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,1,2,2-Tetrachloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,1,2-Trichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,1-Dichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,1-Dichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,1-Dichloropropene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,2,3-Trichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,2,3-Trichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,2,4-Trichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,2,4-Trimethylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,2-Dibromoethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,2-Dichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,2-Dichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,2-Dichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,3,5-Trimethylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,3-Dichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,3-Dichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,4-Dichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 1,4-Dioxane | ND (0.0946) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 2,2-Dichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 2-Butanone | ND (0.0473) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 2-Chlorotoluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 2-Hexanone | ND (0.0473) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 4-Chlorotoluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 4-Isopropyltoluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| 4-Methyl-2-Pentanone | ND (0.0473) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Acetone | ND (0.0473) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Benzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Bromobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-7
Date Sampled: 04/29/24 11:25
Percent Solids: 87
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Bromodichloromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Bromoform | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Bromomethane | ND (0.0095) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Carbon Disulfide | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Carbon Tetrachloride | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Chlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Chloroethane | ND (0.0095) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Chloroform | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Chloromethane | ND (0.0095) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| cis-1,2-Dichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| cis-1,3-Dichloropropene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Dibromochloromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Dibromomethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Dichlorodifluoromethane | ND (0.0095) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Diethyl Ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Di-isopropyl ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Ethyl tertiary-butyl ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Ethylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Hexachlorobutadiene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Isopropylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Methyl tert-Butyl Ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Methylene Chloride | ND (0.0236) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Naphthalene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| n-Butylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| n-Propylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| sec-Butylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Styrene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| tert-Butylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Tertiary-amyl methyl ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Tetrachloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-7
Date Sampled: 04/29/24 11:25
Percent Solids: 87
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0189) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Toluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| trans-1,2-Dichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| trans-1,3-Dichloropropene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Trichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Trichlorofluoromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Vinyl Chloride | ND (0.0095) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Xylene O | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Xylene P,M | ND (0.0095) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |
| Xylenes (Total) | ND (0.0095) | | 8260D Low | | 1 | MEK | 05/01/24 19:13 | D4E0014 | DE40133 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *121 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *99 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *111 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *96 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-7
Date Sampled: 04/29/24 11:25
Percent Solids: 87
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.029) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 1,2,4-Trichlorobenzene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 1,2-Dichlorobenzene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 1,3-Dichlorobenzene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 1,4-Dichlorobenzene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 2,4,5-Trichlorophenol | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 2,4,6-Trichlorophenol | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 2,4-Dichlorophenol | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 2,4-Dimethylphenol | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 2,4-Dinitrophenol | ND (1.14) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 2,4-Dinitrotoluene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 2,6-Dinitrotoluene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 2-Chloronaphthalene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 2-Chlorophenol | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 2-Methylnaphthalene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 2-Methylphenol | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 2-Nitrophenol | ND (0.571) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 3,3´-Dichlorobenzidine | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 3+4-Methylphenol | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 4-Bromophenyl-phenylether | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 4-Chloroaniline | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| 4-Nitrophenol | ND (1.14) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Acenaphthene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Acenaphthylene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Acetophenone | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Aniline | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Anthracene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Azobenzene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Benzo(a)anthracene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Benzo(a)pyrene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Benzo(b)fluoranthene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-7
Date Sampled: 04/29/24 11:25
Percent Solids: 87
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Benzo(k)fluoranthene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| bis(2-Chloroethoxy)methane | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| bis(2-Chloroethyl)ether | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| bis(2-chloroisopropyl)Ether | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| bis(2-Ethylhexyl)phthalate | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Butylbenzylphthalate | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Chrysene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Dibenzo(a,h)Anthracene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Dibenzofuran | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Diethylphthalate | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Dimethylphthalate | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Di-n-butylphthalate | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Di-n-octylphthalate | ND (0.571) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Fluoranthene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Fluorene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Hexachlorobenzene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Hexachlorobutadiene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Hexachloroethane | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Indeno(1,2,3-cd)Pyrene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Isophorone | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Naphthalene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Nitrobenzene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| N-Nitrosodimethylamine | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Pentachlorophenol | ND (1.14) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Phenanthrene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Phenol | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Pyrene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |
| Pyridine | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 2:14 | D4E0021 | DD43017 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *97 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-7
Date Sampled: 04/29/24 11:25
Percent Solids: 87
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *147 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *93 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *107 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *92 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *95 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *90 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *116 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-7
Date Sampled: 04/29/24 11:25
Percent Solids: 87
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 05/02/24 13:28 | | DD43003 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 05/02/24 13:28 | | DD43003 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 05/02/24 13:28 | | DD43003 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 05/02/24 13:28 | | DD43003 |
| **Aroclor 1248** | **0.08** (0.06) | | 8082A | | 1 | 05/02/24 13:28 | | DD43003 |
| **Aroclor 1254** | **0.07** (0.06) | | 8082A | | 1 | 05/02/24 13:28 | | DD43003 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 05/02/24 13:28 | | DD43003 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 05/02/24 13:28 | | DD43003 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 05/02/24 13:28 | | DD43003 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-7
Date Sampled: 04/29/24 11:25
Percent Solids: 87
Initial Volume: 19.8g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 4/30/24 19:18

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0029) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| 4,4´-DDE | ND (0.0029) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| 4,4´-DDT | ND (0.0029) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| Aldrin | ND (0.0029) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| alpha-BHC | ND (0.0029) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| alpha-Chlordane | ND (0.0029) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| beta-BHC | ND (0.0029) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| Chlordane (Total) | ND (0.0233) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| delta-BHC | ND (0.0029) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| Dieldrin | ND (0.0029) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| Endosulfan I | ND (0.0029) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| Endosulfan II | ND (0.0029) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| Endosulfan Sulfate | ND (0.0029) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| Endrin | ND (0.0029) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| Endrin Ketone | ND (0.0029) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| gamma-BHC (Lindane) | ND (0.0017) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| gamma-Chlordane | ND (0.0029) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| Heptachlor | ND (0.0029) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| Heptachlor Epoxide | ND (0.0029) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| Hexachlorobenzene | ND (0.0029) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| Methoxychlor | ND (0.0029) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |
| Toxaphene | ND (0.146) | | 8081B | | 1 | 05/01/24 20:28 | D4E0002 | DD43037 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *100 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *90 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-7
Date Sampled: 04/29/24 11:25
Percent Solids: 87
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 15:58

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.011) | | 8151A | | 1 | 05/07/24 3:40 | D4E0111 | DE40248 |
| 2,4,5-TP (Silvex) | ND (0.011) | | 8151A | | 1 | 05/07/24 3:40 | D4E0111 | DE40248 |
| 2,4-D | ND (0.053) | | 8151A | | 1 | 05/07/24 3:40 | D4E0111 | DE40248 |
| 2,4-DB | ND (0.054) | | 8151A | | 1 | 05/07/24 3:40 | D4E0111 | DE40248 |
| Dalapon | ND (0.051) | | 8151A | | 1 | 05/07/24 3:40 | D4E0111 | DE40248 |
| Dicamba | ND (0.011) | | 8151A | | 1 | 05/07/24 3:40 | D4E0111 | DE40248 |
| Dichlorprop | ND (0.053) | | 8151A | | 1 | 05/07/24 3:40 | D4E0111 | DE40248 |
| Dinoseb | ND (0.054) | | 8151A | | 1 | 05/07/24 3:40 | D4E0111 | DE40248 |
| MCPA | ND (2.63) | | 8151A | | 1 | 05/07/24 3:40 | D4E0111 | DE40248 |
| MCPP | ND (2.66) | | 8151A | | 1 | 05/07/24 3:40 | D4E0111 | DE40248 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *66 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-7
Date Sampled: 04/29/24 11:25
Percent Solids: 87
Initial Volume: 20.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/1/24 10:50

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **16.2** (11.2) | | 8100M | | 1 | 05/02/24 19:16 | | DE40105 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *68 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-7
Date Sampled: 04/29/24 11:25
Percent Solids: 87

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-09
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 56** (5) | | 9050A | | 1 | EEM | 05/01/24 13:40 | umhos/cm | DE40128 |
| **Corrosivity (pH)** | **6.67** (N/A) | | 9045 | | 1 | JLK | 04/30/24 19:53 | S.U. | DD43035 |
| **Corrosivity (pH) Sample Temp** | **20.5** | | 2550B | | 1 | JLK | 04/30/24 19:53 | °C | DD43035 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 16:36 | °F | DE40144 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 04/30/24 21:22 | ml/5 min | DD43051 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-5
Date Sampled: 04/29/24 11:40
Percent Solids: 91

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-10
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **3.12** (0.80) | | 6010D | | 1 | KJB | 05/01/24 14:55 | 2.77 | 100 | DE40108 |
| **Barium** | **16.4** (0.80) | | 6010D | | 1 | KJB | 05/01/24 14:55 | 2.77 | 100 | DE40108 |
| Cadmium | ND (0.40) | | 6010D | | 1 | KJB | 05/01/24 14:55 | 2.77 | 100 | DE40108 |
| **Chromium** | **7.16** (0.80) | | 6010D | | 1 | KJB | 05/01/24 14:55 | 2.77 | 100 | DE40108 |
| **Lead** | **6.21** (3.98) | | 6010D | | 1 | KJB | 05/01/24 14:55 | 2.77 | 100 | DE40108 |
| Mercury | ND (0.033) | | 7471B | | 1 | AFV | 05/01/24 16:11 | 0.66 | 40 | DE40107 |
| Selenium | ND (3.98) | | 6010D | | 1 | KJB | 05/01/24 14:55 | 2.77 | 100 | DE40108 |
| Silver | ND (0.40) | | 6010D | | 1 | KJB | 05/01/24 14:55 | 2.77 | 100 | DE40108 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-5
Date Sampled: 04/29/24 11:40
Percent Solids: 91
Initial Volume: 6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,1,1-Trichloroethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,1,2,2-Tetrachloroethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,1,2-Trichloroethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,1-Dichloroethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,1-Dichloroethene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,1-Dichloropropene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,2,3-Trichlorobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,2,3-Trichloropropane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,2,4-Trichlorobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,2,4-Trimethylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,2-Dibromoethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,2-Dichlorobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,2-Dichloroethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,2-Dichloropropane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,3,5-Trimethylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,3-Dichlorobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,3-Dichloropropane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,4-Dichlorobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 1,4-Dioxane | ND (0.0918) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 2,2-Dichloropropane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 2-Butanone | ND (0.0459) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 2-Chlorotoluene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 2-Hexanone | ND (0.0459) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 4-Chlorotoluene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 4-Isopropyltoluene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| 4-Methyl-2-Pentanone | ND (0.0459) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Acetone | ND (0.0459) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Benzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Bromobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-5
Date Sampled: 04/29/24 11:40
Percent Solids: 91
Initial Volume: 6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Bromodichloromethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Bromoform | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Bromomethane | ND (0.0092) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Carbon Disulfide | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Carbon Tetrachloride | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Chlorobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Chloroethane | ND (0.0092) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Chloroform | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Chloromethane | ND (0.0092) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| cis-1,2-Dichloroethene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| cis-1,3-Dichloropropene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Dibromochloromethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Dibromomethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Dichlorodifluoromethane | ND (0.0092) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Diethyl Ether | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Di-isopropyl ether | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Ethyl tertiary-butyl ether | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Ethylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Hexachlorobutadiene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Isopropylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Methyl tert-Butyl Ether | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Methylene Chloride | ND (0.0229) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Naphthalene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| n-Butylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| n-Propylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| sec-Butylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Styrene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| tert-Butylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Tertiary-amyl methyl ether | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Tetrachloroethene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-5
Date Sampled: 04/29/24 11:40
Percent Solids: 91
Initial Volume: 6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0184) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Toluene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| trans-1,2-Dichloroethene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| trans-1,3-Dichloropropene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Trichloroethene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Trichlorofluoromethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Vinyl Chloride | ND (0.0092) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Xylene O | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Xylene P,M | ND (0.0092) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |
| Xylenes (Total) | ND (0.0092) | | 8260D Low | | 1 | MEK | 05/01/24 19:38 | D4E0014 | DE40133 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *121 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *101 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *111 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *96 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-5
Date Sampled: 04/29/24 11:40
Percent Solids: 91
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 1,2,4-Trichlorobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 1,2-Dichlorobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 1,3-Dichlorobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 1,4-Dichlorobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 2,4,5-Trichlorophenol | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 2,4,6-Trichlorophenol | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 2,4-Dichlorophenol | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 2,4-Dimethylphenol | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 2,4-Dinitrophenol | ND (1.08) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 2,4-Dinitrotoluene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 2,6-Dinitrotoluene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 2-Chloronaphthalene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 2-Chlorophenol | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 2-Methylnaphthalene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 2-Methylphenol | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 2-Nitrophenol | ND (0.542) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 3,3´-Dichlorobenzidine | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 3+4-Methylphenol | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 4-Bromophenyl-phenylether | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 4-Chloroaniline | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| 4-Nitrophenol | ND (1.08) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Acenaphthene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Acenaphthylene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Acetophenone | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Aniline | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Anthracene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Azobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Benzo(a)anthracene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Benzo(a)pyrene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Benzo(b)fluoranthene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-5
Date Sampled: 04/29/24 11:40
Percent Solids: 91
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Benzo(k)fluoranthene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| bis(2-Chloroethoxy)methane | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| bis(2-Chloroethyl)ether | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| bis(2-chloroisopropyl)Ether | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| bis(2-Ethylhexyl)phthalate | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Butylbenzylphthalate | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Chrysene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Dibenzo(a,h)Anthracene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Dibenzofuran | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Diethylphthalate | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Dimethylphthalate | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Di-n-butylphthalate | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Di-n-octylphthalate | ND (0.542) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Fluoranthene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Fluorene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Hexachlorobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Hexachlorobutadiene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Hexachloroethane | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Indeno(1,2,3-cd)Pyrene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Isophorone | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Naphthalene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Nitrobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| N-Nitrosodimethylamine | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Pentachlorophenol | ND (1.08) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Phenanthrene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Phenol | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Pyrene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |
| Pyridine | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 2:44 | D4E0021 | DD43017 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *103 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-5
Date Sampled: 04/29/24 11:40
Percent Solids: 91
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *160 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *102 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *113 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *101 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *98 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *98 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *121 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-5
Date Sampled: 04/29/24 11:40
Percent Solids: 91
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:48 | | DD43003 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:48 | | DD43003 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:48 | | DD43003 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:48 | | DD43003 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:48 | | DD43003 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:48 | | DD43003 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:48 | | DD43003 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:48 | | DD43003 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:48 | | DD43003 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *87 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-5
Date Sampled: 04/29/24 11:40
Percent Solids: 91
Initial Volume: 20.2g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 4/30/24 19:18

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| 4,4´-DDE | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| 4,4´-DDT | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| Aldrin | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| alpha-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| alpha-Chlordane | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| beta-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| Chlordane (Total) | ND (0.0218) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| delta-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| Dieldrin | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| Endosulfan I | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| Endosulfan II | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| Endosulfan Sulfate | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| Endrin | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| Endrin Ketone | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| gamma-BHC (Lindane) | ND (0.0016) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| gamma-Chlordane | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| Heptachlor | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| Heptachlor Epoxide | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| Hexachlorobenzene | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| Methoxychlor | ND (0.0027) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |
| Toxaphene | ND (0.136) | | 8081B | | 1 | 05/01/24 20:56 | D4E0002 | DD43037 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *109 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *95 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-5
Date Sampled: 04/29/24 11:40
Percent Solids: 91
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 15:58

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/07/24 4:09 | D4E0111 | DE40248 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/07/24 4:09 | D4E0111 | DE40248 |
| 2,4-D | ND (0.051) | | 8151A | | 1 | 05/07/24 4:09 | D4E0111 | DE40248 |
| 2,4-DB | ND (0.051) | | 8151A | | 1 | 05/07/24 4:09 | D4E0111 | DE40248 |
| Dalapon | ND (0.049) | | 8151A | | 1 | 05/07/24 4:09 | D4E0111 | DE40248 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/07/24 4:09 | D4E0111 | DE40248 |
| Dichlorprop | ND (0.051) | | 8151A | | 1 | 05/07/24 4:09 | D4E0111 | DE40248 |
| Dinoseb | ND (0.051) | | 8151A | | 1 | 05/07/24 4:09 | D4E0111 | DE40248 |
| MCPA | ND (2.51) | | 8151A | | 1 | 05/07/24 4:09 | D4E0111 | DE40248 |
| MCPP | ND (2.54) | | 8151A | | 1 | 05/07/24 4:09 | D4E0111 | DE40248 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *70 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-5
Date Sampled: 04/29/24 11:40
Percent Solids: 91
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/1/24 10:50

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (10.5) | | 8100M | | 1 | 05/02/24 15:23 | | DE40105 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *72 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-5
Date Sampled: 04/29/24 11:40
Percent Solids: 91

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-10
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 9** (5) | | 9050A | | 1 | EEM | 05/01/24 13:40 | umhos/cm | DE40128 |
| **Corrosivity (pH)** | **6.48** (N/A) | | 9045 | | 1 | JLK | 04/30/24 19:53 | S.U. | DD43035 |
| **Corrosivity (pH) Sample Temp** | **20.4** | | 2550B | | 1 | JLK | 04/30/24 19:53 | °C | DD43035 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 16:36 | °F | DE40144 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 04/30/24 21:22 | ml/5 min | DD43051 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-3
Date Sampled: 04/29/24 11:50
Percent Solids: 92

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-11
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.08** (0.83) | | 6010D | | 1 | KJB | 05/01/24 15:13 | 2.6 | 100 | DE40108 |
| **Barium** | **16.4** (0.83) | | 6010D | | 1 | KJB | 05/01/24 15:13 | 2.6 | 100 | DE40108 |
| Cadmium | ND (0.42) | | 6010D | | 1 | KJB | 05/01/24 15:13 | 2.6 | 100 | DE40108 |
| **Chromium** | **9.93** (0.83) | | 6010D | | 1 | KJB | 05/01/24 15:13 | 2.6 | 100 | DE40108 |
| **Lead** | **13.9** (4.17) | | 6010D | | 1 | KJB | 05/01/24 15:13 | 2.6 | 100 | DE40108 |
| Mercury | ND (0.036) | | 7471B | | 1 | AFV | 05/01/24 16:13 | 0.6 | 40 | DE40107 |
| Selenium | ND (4.17) | | 6010D | | 1 | KJB | 05/01/24 15:13 | 2.6 | 100 | DE40108 |
| Silver | ND (0.42) | | 6010D | | 1 | KJB | 05/01/24 15:13 | 2.6 | 100 | DE40108 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-3
Date Sampled: 04/29/24 11:50
Percent Solids: 92
Initial Volume: 6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,1,1-Trichloroethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,1,2,2-Tetrachloroethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,1,2-Trichloroethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,1-Dichloroethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,1-Dichloroethene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,1-Dichloropropene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,2,3-Trichlorobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,2,3-Trichloropropane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,2,4-Trichlorobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,2,4-Trimethylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,2-Dibromoethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,2-Dichlorobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,2-Dichloroethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,2-Dichloropropane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,3,5-Trimethylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,3-Dichlorobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,3-Dichloropropane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,4-Dichlorobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 1,4-Dioxane | ND (0.0904) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 2,2-Dichloropropane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 2-Butanone | ND (0.0452) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 2-Chlorotoluene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 2-Hexanone | ND (0.0452) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 4-Chlorotoluene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 4-Isopropyltoluene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| 4-Methyl-2-Pentanone | ND (0.0452) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Acetone | ND (0.0452) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Benzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Bromobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-3
Date Sampled: 04/29/24 11:50
Percent Solids: 92
Initial Volume: 6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Bromodichloromethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Bromoform | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Bromomethane | ND (0.0090) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Carbon Disulfide | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Carbon Tetrachloride | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Chlorobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Chloroethane | ND (0.0090) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Chloroform | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Chloromethane | ND (0.0090) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| cis-1,2-Dichloroethene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| cis-1,3-Dichloropropene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Dibromochloromethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Dibromomethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Dichlorodifluoromethane | ND (0.0090) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Diethyl Ether | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Di-isopropyl ether | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Ethyl tertiary-butyl ether | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Ethylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Hexachlorobutadiene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Isopropylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Methyl tert-Butyl Ether | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Methylene Chloride | ND (0.0226) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Naphthalene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| n-Butylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| n-Propylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| sec-Butylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Styrene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| tert-Butylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Tertiary-amyl methyl ether | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Tetrachloroethene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-3
Date Sampled: 04/29/24 11:50
Percent Solids: 92
Initial Volume: 6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0181) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Toluene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| trans-1,2-Dichloroethene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| trans-1,3-Dichloropropene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Trichloroethene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Trichlorofluoromethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Vinyl Chloride | ND (0.0090) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Xylene O | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Xylene P,M | ND (0.0090) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |
| Xylenes (Total) | ND (0.0090) | | 8260D Low | | 1 | MEK | 05/01/24 20:04 | D4E0014 | DE40133 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *121 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *99 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *110 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *96 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-3
Date Sampled: 04/29/24 11:50
Percent Solids: 92
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 1,2,4-Trichlorobenzene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 1,2-Dichlorobenzene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 1,3-Dichlorobenzene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 1,4-Dichlorobenzene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 2,4,5-Trichlorophenol | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 2,4,6-Trichlorophenol | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 2,4-Dichlorophenol | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 2,4-Dimethylphenol | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 2,4-Dinitrophenol | ND (1.07) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 2,4-Dinitrotoluene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 2,6-Dinitrotoluene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 2-Chloronaphthalene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 2-Chlorophenol | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 2-Methylnaphthalene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 2-Methylphenol | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 2-Nitrophenol | ND (0.537) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 3,3´-Dichlorobenzidine | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 3+4-Methylphenol | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 4-Bromophenyl-phenylether | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 4-Chloroaniline | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| 4-Nitrophenol | ND (1.07) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Acenaphthene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Acenaphthylene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Acetophenone | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Aniline | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Anthracene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Azobenzene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Benzo(a)anthracene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Benzo(a)pyrene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Benzo(b)fluoranthene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-3
Date Sampled: 04/29/24 11:50
Percent Solids: 92
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Benzo(k)fluoranthene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| bis(2-Chloroethoxy)methane | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| bis(2-Chloroethyl)ether | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| bis(2-chloroisopropyl)Ether | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| bis(2-Ethylhexyl)phthalate | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Butylbenzylphthalate | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Chrysene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Dibenzo(a,h)Anthracene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Dibenzofuran | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Diethylphthalate | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Dimethylphthalate | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Di-n-butylphthalate | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Di-n-octylphthalate | ND (0.537) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Fluoranthene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Fluorene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Hexachlorobenzene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Hexachlorobutadiene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Hexachloroethane | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Indeno(1,2,3-cd)Pyrene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Isophorone | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Naphthalene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Nitrobenzene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| N-Nitrosodimethylamine | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Pentachlorophenol | ND (1.07) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Phenanthrene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Phenol | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Pyrene | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |
| Pyridine | ND (0.269) | | 8270E | | 1 | TJ | 05/02/24 3:14 | D4E0021 | DD43017 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *104 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-3
Date Sampled: 04/29/24 11:50
Percent Solids: 92
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *157 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *103 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *111 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *101 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *102 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *99 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *125 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-3
Date Sampled: 04/29/24 11:50
Percent Solids: 92
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:08 | | DD43003 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:08 | | DD43003 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:08 | | DD43003 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:08 | | DD43003 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:08 | | DD43003 |
| Aroclor 1254 [2C] | ND (0.05) | | 8082A | | 1 | 05/02/24 14:08 | | DD43003 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:08 | | DD43003 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:08 | | DD43003 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:08 | | DD43003 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *78 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *85 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-3
Date Sampled: 04/29/24 11:50
Percent Solids: 92
Initial Volume: 19.4g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 4/30/24 19:18

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0028) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| 4,4´-DDE | ND (0.0028) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| 4,4´-DDT | ND (0.0028) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| Aldrin | ND (0.0028) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| alpha-BHC | ND (0.0028) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| alpha-Chlordane | ND (0.0028) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| beta-BHC | ND (0.0028) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| Chlordane (Total) | ND (0.0224) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| delta-BHC | ND (0.0028) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| Dieldrin | ND (0.0028) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| Endosulfan I | ND (0.0028) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| Endosulfan II | ND (0.0028) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| Endosulfan Sulfate | ND (0.0028) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| Endrin | ND (0.0028) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| Endrin Ketone | ND (0.0028) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| gamma-BHC (Lindane) | ND (0.0017) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| gamma-Chlordane | ND (0.0028) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| Heptachlor | ND (0.0028) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| Heptachlor Epoxide | ND (0.0028) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| Hexachlorobenzene | ND (0.0028) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| Methoxychlor | ND (0.0028) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |
| Toxaphene | ND (0.140) | | 8081B | | 1 | 05/01/24 21:23 | D4E0002 | DD43037 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *114 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *92 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-3
Date Sampled: 04/29/24 11:50
Percent Solids: 92
Initial Volume: 10.5g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 15:58

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/07/24 4:37 | D4E0111 | DE40248 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/07/24 4:37 | D4E0111 | DE40248 |
| 2,4-D | ND (0.049) | | 8151A | | 1 | 05/07/24 4:37 | D4E0111 | DE40248 |
| 2,4-DB | ND (0.049) | | 8151A | | 1 | 05/07/24 4:37 | D4E0111 | DE40248 |
| Dalapon | ND (0.047) | | 8151A | | 1 | 05/07/24 4:37 | D4E0111 | DE40248 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/07/24 4:37 | D4E0111 | DE40248 |
| Dichlorprop | ND (0.049) | | 8151A | | 1 | 05/07/24 4:37 | D4E0111 | DE40248 |
| Dinoseb | ND (0.049) | | 8151A | | 1 | 05/07/24 4:37 | D4E0111 | DE40248 |
| MCPA | ND (2.40) | | 8151A | | 1 | 05/07/24 4:37 | D4E0111 | DE40248 |
| MCPP | ND (2.43) | | 8151A | | 1 | 05/07/24 4:37 | D4E0111 | DE40248 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *70 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-3
Date Sampled: 04/29/24 11:50
Percent Solids: 92
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/1/24 10:50

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (11.4) | | 8100M | | 1 | 05/02/24 16:02 | | DE40105 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *70 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-3
Date Sampled: 04/29/24 11:50
Percent Solids: 92

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-11
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 119** (5) | | 9050A | | 1 | EEM | 05/01/24 13:40 | umhos/cm | DE40128 |
| **Corrosivity (pH)** | **8.19** (N/A) | | 9045 | | 1 | JLK | 04/30/24 19:53 | S.U. | DD43035 |
| **Corrosivity (pH) Sample Temp** | **20.5** | | 2550B | | 1 | JLK | 04/30/24 19:53 | °C | DD43035 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 16:36 | °F | DE40144 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 04/30/24 21:28 | ml/5 min | DD43051 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-1
Date Sampled: 04/29/24 12:20
Percent Solids: 91

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-12
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **1.47** (0.76) | | 6010D | | 1 | KJB | 05/01/24 15:15 | 2.9 | 100 | DE40108 |
| **Barium** | **16.6** (0.76) | | 6010D | | 1 | KJB | 05/01/24 15:15 | 2.9 | 100 | DE40108 |
| Cadmium | ND (0.38) | | 6010D | | 1 | KJB | 05/01/24 15:15 | 2.9 | 100 | DE40108 |
| **Chromium** | **5.23** (0.76) | | 6010D | | 1 | KJB | 05/01/24 15:15 | 2.9 | 100 | DE40108 |
| **Lead** | **22.1** (3.78) | | 6010D | | 1 | KJB | 05/01/24 15:15 | 2.9 | 100 | DE40108 |
| **Mercury** | **0.130** (0.035) | | 7471B | | 1 | AFV | 05/01/24 16:15 | 0.62 | 40 | DE40107 |
| Selenium | ND (3.78) | | 6010D | | 1 | KJB | 05/01/24 15:15 | 2.9 | 100 | DE40108 |
| Silver | ND (0.38) | | 6010D | | 1 | KJB | 05/01/24 15:15 | 2.9 | 100 | DE40108 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-1
Date Sampled: 04/29/24 12:20
Percent Solids: 91
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,1,1-Trichloroethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,1,2,2-Tetrachloroethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,1,2-Trichloroethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,1-Dichloroethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,1-Dichloroethene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,1-Dichloropropene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,2,3-Trichlorobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,2,3-Trichloropropane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,2,4-Trichlorobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,2,4-Trimethylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,2-Dibromoethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,2-Dichlorobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,2-Dichloroethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,2-Dichloropropane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,3,5-Trimethylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,3-Dichlorobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,3-Dichloropropane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,4-Dichlorobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 1,4-Dioxane | ND (0.0900) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 2,2-Dichloropropane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 2-Butanone | ND (0.0450) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 2-Chlorotoluene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 2-Hexanone | ND (0.0450) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 4-Chlorotoluene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 4-Isopropyltoluene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| 4-Methyl-2-Pentanone | ND (0.0450) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Acetone | ND (0.0450) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Benzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Bromobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-1
Date Sampled: 04/29/24 12:20
Percent Solids: 91
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Bromodichloromethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Bromoform | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Bromomethane | ND (0.0090) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Carbon Disulfide | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Carbon Tetrachloride | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Chlorobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Chloroethane | ND (0.0090) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Chloroform | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Chloromethane | ND (0.0090) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| cis-1,2-Dichloroethene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| cis-1,3-Dichloropropene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Dibromochloromethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Dibromomethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Dichlorodifluoromethane | ND (0.0090) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Diethyl Ether | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Di-isopropyl ether | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Ethyl tertiary-butyl ether | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Ethylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Hexachlorobutadiene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Isopropylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Methyl tert-Butyl Ether | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Methylene Chloride | ND (0.0225) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Naphthalene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| n-Butylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| n-Propylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| sec-Butylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Styrene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| tert-Butylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Tertiary-amyl methyl ether | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Tetrachloroethene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-1
Date Sampled: 04/29/24 12:20
Percent Solids: 91
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/1/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0180) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Toluene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| trans-1,2-Dichloroethene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| trans-1,3-Dichloropropene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Trichloroethene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Trichlorofluoromethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Vinyl Chloride | ND (0.0090) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Xylene O | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Xylene P,M | ND (0.0090) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |
| Xylenes (Total) | ND (0.0090) | | 8260D Low | | 1 | MEK | 05/01/24 20:29 | D4E0014 | DE40133 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *121 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *99 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *109 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *97 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-1
Date Sampled: 04/29/24 12:20
Percent Solids: 91
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 1,2,4-Trichlorobenzene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 1,2-Dichlorobenzene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 1,3-Dichlorobenzene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 1,4-Dichlorobenzene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 2,4,5-Trichlorophenol | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 2,4,6-Trichlorophenol | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 2,4-Dichlorophenol | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 2,4-Dimethylphenol | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 2,4-Dinitrophenol | ND (1.09) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 2,4-Dinitrotoluene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 2,6-Dinitrotoluene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 2-Chloronaphthalene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 2-Chlorophenol | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 2-Methylnaphthalene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 2-Methylphenol | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 2-Nitrophenol | ND (0.543) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 3,3´-Dichlorobenzidine | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 3+4-Methylphenol | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 4-Bromophenyl-phenylether | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 4-Chloroaniline | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| 4-Nitrophenol | ND (1.09) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Acenaphthene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Acenaphthylene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Acetophenone | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Aniline | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Anthracene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Azobenzene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| **Benzo(a)anthracene** | **0.419** (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| **Benzo(a)pyrene** | **0.416** (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| **Benzo(b)fluoranthene** | **0.443** (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-1
Date Sampled: 04/29/24 12:20
Percent Solids: 91
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Benzo(k)fluoranthene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| bis(2-Chloroethoxy)methane | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| bis(2-Chloroethyl)ether | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| bis(2-chloroisopropyl)Ether | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| bis(2-Ethylhexyl)phthalate | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Butylbenzylphthalate | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| **Chrysene** | **0.409** (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Dibenzo(a,h)Anthracene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Dibenzofuran | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Diethylphthalate | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Dimethylphthalate | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Di-n-butylphthalate | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Di-n-octylphthalate | ND (0.543) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| **Fluoranthene** | **0.877** (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Fluorene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Hexachlorobenzene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Hexachlorobutadiene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Hexachloroethane | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Indeno(1,2,3-cd)Pyrene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Isophorone | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Naphthalene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Nitrobenzene | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| N-Nitrosodimethylamine | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Pentachlorophenol | ND (1.09) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| **Phenanthrene** | **0.448** (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Phenol | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| **Pyrene** | **0.755** (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |
| Pyridine | ND (0.272) | | 8270E | | 1 | TJ | 05/02/24 3:45 | D4E0021 | DD43017 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *98 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-1
Date Sampled: 04/29/24 12:20
Percent Solids: 91
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *141 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *95 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *108 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *92 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *96 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *91 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *113 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-1
Date Sampled: 04/29/24 12:20
Percent Solids: 91
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:28 | | DD43003 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:28 | | DD43003 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:28 | | DD43003 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:28 | | DD43003 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:28 | | DD43003 |
| **Aroclor 1254 [2C]** | **2.3** (0.3) | | 8082A | | 5 | 05/02/24 16:27 | | DD43003 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:28 | | DD43003 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:28 | | DD43003 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:28 | | DD43003 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *76 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-1
Date Sampled: 04/29/24 12:20
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 4/30/24 19:18

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| 4,4´-DDE | ND (0.0027) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| 4,4´-DDT | ND (0.0027) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| Aldrin | ND (0.0027) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| **alpha-BHC [2C]** | **P, LC 0.0034** (0.0027) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| alpha-Chlordane | ND (0.0027) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| beta-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| Chlordane (Total) | ND (0.0214) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| delta-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| **Dieldrin** | **0.0252** (0.0027) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| Endosulfan I | ND (0.0027) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| **Endosulfan II** | **P, LC 0.0060** (0.0027) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| Endosulfan Sulfate | ND (0.0027) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| Endrin | ND (0.0027) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| Endrin Ketone | ND (0.0027) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| gamma-BHC (Lindane) | ND (0.0016) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| gamma-Chlordane | ND (0.0027) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| Heptachlor | ND (0.0027) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| Heptachlor Epoxide | ND (0.0027) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| Hexachlorobenzene | ND (0.0027) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| Methoxychlor | ND (0.0027) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |
| Toxaphene | ND (0.134) | | 8081B | | 1 | 05/01/24 21:51 | D4E0002 | DD43037 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *123 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *93 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-1
Date Sampled: 04/29/24 12:20
Percent Solids: 91
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 15:58

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/07/24 6:32 | D4E0111 | DE40248 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/07/24 6:32 | D4E0111 | DE40248 |
| 2,4-D | ND (0.050) | | 8151A | | 1 | 05/07/24 6:32 | D4E0111 | DE40248 |
| 2,4-DB | ND (0.051) | | 8151A | | 1 | 05/07/24 6:32 | D4E0111 | DE40248 |
| Dalapon | ND (0.048) | | 8151A | | 1 | 05/07/24 6:32 | D4E0111 | DE40248 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/07/24 6:32 | D4E0111 | DE40248 |
| Dichlorprop | ND (0.050) | | 8151A | | 1 | 05/07/24 6:32 | D4E0111 | DE40248 |
| Dinoseb | ND (0.051) | | 8151A | | 1 | 05/07/24 6:32 | D4E0111 | DE40248 |
| MCPA | ND (2.48) | | 8151A | | 1 | 05/07/24 6:32 | D4E0111 | DE40248 |
| MCPP | ND (2.50) | | 8151A | | 1 | 05/07/24 6:32 | D4E0111 | DE40248 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *57 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-1
Date Sampled: 04/29/24 12:20
Percent Solids: 91
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/1/24 10:50

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **42.0** (11.5) | | 8100M | | 1 | 05/02/24 16:41 | | DE40105 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *70 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-1
Date Sampled: 04/29/24 12:20
Percent Solids: 91

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-12
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 46** (5) | | 9050A | | 1 | EEM | 05/01/24 13:40 | umhos/cm | DE40128 |
| **Corrosivity (pH)** | **7.10** (N/A) | | 9045 | | 1 | EAM | 05/01/24 18:58 | S.U. | DE40148 |
| **Corrosivity (pH) Sample Temp** | **20.9** | | 2550B | | 1 | EAM | 05/01/24 18:58 | °C | DE40148 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 16:36 | °F | DE40144 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 04/30/24 21:28 | ml/5 min | DD43051 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/01/24 16:08 | mg/kg | DD43048 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/01/24 16:08 | mg/kg | DD43048 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-8.5
Date Sampled: 04/29/24 11:15
Percent Solids: 90

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-13
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **6.02** (0.75) | | 6010D | | 1 | KJB | 05/01/24 15:17 | 2.99 | 100 | DE40108 |
| **Barium** | **66.6** (0.75) | | 6010D | | 1 | KJB | 05/01/24 15:17 | 2.99 | 100 | DE40108 |
| Cadmium | ND (0.37) | | 6010D | | 1 | KJB | 05/01/24 15:17 | 2.99 | 100 | DE40108 |
| **Chromium** | **12.0** (0.75) | | 6010D | | 1 | KJB | 05/01/24 15:17 | 2.99 | 100 | DE40108 |
| **Lead** | **134** (3.73) | | 6010D | | 1 | KJB | 05/01/24 15:17 | 2.99 | 100 | DE40108 |
| **Mercury** | **0.142** (0.037) | | 7471B | | 1 | AFV | 05/01/24 16:17 | 0.6 | 40 | DE40107 |
| Selenium | ND (3.73) | | 6010D | | 1 | KJB | 05/01/24 15:17 | 2.99 | 100 | DE40108 |
| Silver | ND (0.37) | | 6010D | | 1 | KJB | 05/01/24 15:17 | 2.99 | 100 | DE40108 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-8.5
Date Sampled: 04/29/24 11:15
Percent Solids: 90

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-13
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.71** (0.05) | | 1311/6010D | | 1 | KJB | 05/06/24 17:03 | 50 | 50 | DE40325 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-8.5
Date Sampled: 04/29/24 11:15
Percent Solids: 90
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,1,1-Trichloroethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,1,2,2-Tetrachloroethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,1,2-Trichloroethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,1-Dichloroethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,1-Dichloroethene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,1-Dichloropropene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,2,3-Trichlorobenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,2,3-Trichloropropane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,2,4-Trichlorobenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,2,4-Trimethylbenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,2-Dibromoethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,2-Dichlorobenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,2-Dichloroethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,2-Dichloropropane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,3,5-Trimethylbenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,3-Dichlorobenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,3-Dichloropropane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,4-Dichlorobenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 1,4-Dioxane | ND (0.0960) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 2,2-Dichloropropane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 2-Butanone | ND (0.0480) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 2-Chlorotoluene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 2-Hexanone | ND (0.0480) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 4-Chlorotoluene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 4-Isopropyltoluene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| 4-Methyl-2-Pentanone | ND (0.0480) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Acetone | ND (0.0480) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Benzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Bromobenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-8.5
Date Sampled: 04/29/24 11:15
Percent Solids: 90
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Bromodichloromethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Bromoform | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Bromomethane | ND (0.0096) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Carbon Disulfide | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Carbon Tetrachloride | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Chlorobenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Chloroethane | ND (0.0096) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Chloroform | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Chloromethane | ND (0.0096) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| cis-1,2-Dichloroethene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| cis-1,3-Dichloropropene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Dibromochloromethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Dibromomethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Dichlorodifluoromethane | ND (0.0096) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Diethyl Ether | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Di-isopropyl ether | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Ethyl tertiary-butyl ether | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Ethylbenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Hexachlorobutadiene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Isopropylbenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Methyl tert-Butyl Ether | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Methylene Chloride | ND (0.0240) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Naphthalene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| n-Butylbenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| n-Propylbenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| sec-Butylbenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Styrene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| tert-Butylbenzene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Tertiary-amyl methyl ether | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Tetrachloroethene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-8.5
Date Sampled: 04/29/24 11:15
Percent Solids: 90
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0192) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Toluene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| trans-1,2-Dichloroethene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| trans-1,3-Dichloropropene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Trichloroethene | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Trichlorofluoromethane | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Vinyl Chloride | ND (0.0096) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Xylene O | ND (0.0048) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Xylene P,M | ND (0.0096) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |
| Xylenes (Total) | ND (0.0096) | | 8260D Low | | 1 | MEK | 05/03/24 14:56 | D4E0068 | DE40324 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *105 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *96 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *103 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *99 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-8.5
Date Sampled: 04/29/24 11:15
Percent Solids: 90
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.029) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 1,2,4-Trichlorobenzene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 1,2-Dichlorobenzene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 1,3-Dichlorobenzene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 1,4-Dichlorobenzene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 2,4,5-Trichlorophenol | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 2,4,6-Trichlorophenol | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 2,4-Dichlorophenol | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 2,4-Dimethylphenol | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 2,4-Dinitrophenol | ND (1.14) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 2,4-Dinitrotoluene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 2,6-Dinitrotoluene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 2-Chloronaphthalene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 2-Chlorophenol | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 2-Methylnaphthalene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 2-Methylphenol | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 2-Nitrophenol | ND (0.571) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 3,3´-Dichlorobenzidine | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 3+4-Methylphenol | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 4-Bromophenyl-phenylether | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 4-Chloroaniline | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| 4-Nitrophenol | ND (1.14) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Acenaphthene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Acenaphthylene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Acetophenone | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Aniline | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Anthracene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Azobenzene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Benzo(a)anthracene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Benzo(a)pyrene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Benzo(b)fluoranthene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-8.5
Date Sampled: 04/29/24 11:15
Percent Solids: 90
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Benzo(k)fluoranthene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| bis(2-Chloroethoxy)methane | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| bis(2-Chloroethyl)ether | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| bis(2-chloroisopropyl)Ether | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| bis(2-Ethylhexyl)phthalate | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Butylbenzylphthalate | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Chrysene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Dibenzo(a,h)Anthracene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Dibenzofuran | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Diethylphthalate | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Dimethylphthalate | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Di-n-butylphthalate | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Di-n-octylphthalate | ND (0.571) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Fluoranthene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Fluorene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Hexachlorobenzene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Hexachlorobutadiene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Hexachloroethane | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Indeno(1,2,3-cd)Pyrene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Isophorone | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Naphthalene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Nitrobenzene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| N-Nitrosodimethylamine | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Pentachlorophenol | ND (1.14) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Phenanthrene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Phenol | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Pyrene | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |
| Pyridine | ND (0.286) | | 8270E | | 1 | TJ | 05/02/24 4:15 | D4E0021 | DD43017 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *98 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-8.5
Date Sampled: 04/29/24 11:15
Percent Solids: 90
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 4/30/24 19:04

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *144 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *97 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *104 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *94 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *93 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *93 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *115 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-8.5
Date Sampled: 04/29/24 11:15
Percent Solids: 90
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:47 | | DD43003 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:47 | | DD43003 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:47 | | DD43003 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:47 | | DD43003 |
| **Aroclor 1248** | **0.1** (0.05) | | 8082A | | 1 | 05/02/24 14:47 | | DD43003 |
| **Aroclor 1254** | **0.2** (0.05) | | 8082A | | 1 | 05/02/24 14:47 | | DD43003 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:47 | | DD43003 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:47 | | DD43003 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:47 | | DD43003 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *74 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-8.5
Date Sampled: 04/29/24 11:15
Percent Solids: 90
Initial Volume: 20.5g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 4/30/24 19:18

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| 4,4´-DDE | ND (0.0027) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| 4,4´-DDT | ND (0.0027) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| Aldrin | ND (0.0027) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| alpha-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| alpha-Chlordane | ND (0.0027) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| beta-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| Chlordane (Total) | ND (0.0217) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| delta-BHC | ND (0.0027) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| Dieldrin | ND (0.0027) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| Endosulfan I | ND (0.0027) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| Endosulfan II | ND (0.0027) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| Endosulfan Sulfate | ND (0.0027) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| Endrin | ND (0.0027) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| Endrin Ketone | ND (0.0027) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| gamma-BHC (Lindane) | ND (0.0016) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| gamma-Chlordane | ND (0.0027) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| Heptachlor | ND (0.0027) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| Heptachlor Epoxide | ND (0.0027) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| Hexachlorobenzene | ND (0.0027) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| Methoxychlor | ND (0.0027) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |
| Toxaphene | ND (0.136) | | 8081B | | 1 | 05/01/24 22:19 | D4E0002 | DD43037 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *102 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *87 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-8.5
Date Sampled: 04/29/24 11:15
Percent Solids: 90
Initial Volume: 10.4g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 15:58

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/07/24 7:01 | D4E0111 | DE40248 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/07/24 7:01 | D4E0111 | DE40248 |
| 2,4-D | ND (0.050) | | 8151A | | 1 | 05/07/24 7:01 | D4E0111 | DE40248 |
| 2,4-DB | ND (0.051) | | 8151A | | 1 | 05/07/24 7:01 | D4E0111 | DE40248 |
| Dalapon | ND (0.049) | | 8151A | | 1 | 05/07/24 7:01 | D4E0111 | DE40248 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/07/24 7:01 | D4E0111 | DE40248 |
| Dichlorprop | ND (0.050) | | 8151A | | 1 | 05/07/24 7:01 | D4E0111 | DE40248 |
| Dinoseb | ND (0.051) | | 8151A | | 1 | 05/07/24 7:01 | D4E0111 | DE40248 |
| MCPA | ND (2.49) | | 8151A | | 1 | 05/07/24 7:01 | D4E0111 | DE40248 |
| MCPP | ND (2.52) | | 8151A | | 1 | 05/07/24 7:01 | D4E0111 | DE40248 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *65 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-8.5
Date Sampled: 04/29/24 11:15
Percent Solids: 90
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/1/24 10:50

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (11.1) | | 8100M | | 1 | 05/02/24 18:37 | | DE40105 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *65 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-8.5
Date Sampled: 04/29/24 11:15
Percent Solids: 90

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-13
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 136** (5) | | 9050A | | 1 | EEM | 05/01/24 13:40 | umhos/cm | DE40128 |
| **Corrosivity (pH)** | **8.15** (N/A) | | 9045 | | 1 | JLK | 04/30/24 19:53 | S.U. | DD43035 |
| **Corrosivity (pH) Sample Temp** | **20.5** | | 2550B | | 1 | JLK | 04/30/24 19:53 | °C | DD43035 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 16:36 | °F | DE40144 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 04/30/24 21:28 | ml/5 min | DD43051 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-8.5
Date Sampled: 04/29/24 11:15
Percent Solids: 90
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-13
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/2/24 19:12

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Batch |
|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **19.9** (N/A) | | 1311 | | 1 | RAP | 05/03/24 11:12 | DE40241 |
| **Temperature (Max C)** | **21.3** (N/A) | | 1311 | | 1 | RAP | 05/03/24 11:12 | DE40241 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 ºC.** (N/A) | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-0.5
Date Sampled: 04/29/24 15:00
Percent Solids: 90

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-14
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.39** (0.83) | | 6010D | | 1 | KJB | 05/01/24 15:19 | 2.7 | 100 | DE40108 |
| **Barium** | **28.6** (0.83) | | 6010D | | 1 | KJB | 05/01/24 15:19 | 2.7 | 100 | DE40108 |
| Cadmium | ND (0.41) | | 6010D | | 1 | KJB | 05/01/24 15:19 | 2.7 | 100 | DE40108 |
| **Chromium** | **10.7** (0.83) | | 6010D | | 1 | KJB | 05/01/24 15:19 | 2.7 | 100 | DE40108 |
| **Lead** | **37.6** (4.13) | | 6010D | | 1 | KJB | 05/01/24 15:19 | 2.7 | 100 | DE40108 |
| Mercury | ND (0.033) | | 7471B | | 1 | AFV | 05/01/24 16:19 | 0.67 | 40 | DE40107 |
| Selenium | ND (4.13) | | 6010D | | 1 | KJB | 05/01/24 15:19 | 2.7 | 100 | DE40108 |
| Silver | ND (0.41) | | 6010D | | 1 | KJB | 05/01/24 15:19 | 2.7 | 100 | DE40108 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-0.5
Date Sampled: 04/29/24 15:00
Percent Solids: 90
Initial Volume: 4.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,1,1-Trichloroethane | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,1,2,2-Tetrachloroethane | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,1,2-Trichloroethane | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,1-Dichloroethane | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,1-Dichloroethene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,1-Dichloropropene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,2,3-Trichlorobenzene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,2,3-Trichloropropane | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,2,4-Trichlorobenzene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,2,4-Trimethylbenzene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,2-Dibromoethane | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,2-Dichlorobenzene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,2-Dichloroethane | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,2-Dichloropropane | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,3,5-Trimethylbenzene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,3-Dichlorobenzene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,3-Dichloropropane | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,4-Dichlorobenzene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 1,4-Dioxane | ND (0.136) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 2,2-Dichloropropane | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 2-Butanone | ND (0.0679) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 2-Chlorotoluene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 2-Hexanone | ND (0.0679) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 4-Chlorotoluene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 4-Isopropyltoluene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| 4-Methyl-2-Pentanone | ND (0.0679) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Acetone | ND (0.0679) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Benzene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Bromobenzene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-0.5
Date Sampled: 04/29/24 15:00
Percent Solids: 90
Initial Volume: 4.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Bromodichloromethane | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Bromoform | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Bromomethane | ND (0.0136) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Carbon Disulfide | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Carbon Tetrachloride | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Chlorobenzene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Chloroethane | ND (0.0136) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Chloroform | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Chloromethane | ND (0.0136) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| cis-1,2-Dichloroethene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| cis-1,3-Dichloropropene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Dibromochloromethane | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Dibromomethane | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Dichlorodifluoromethane | ND (0.0136) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Diethyl Ether | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Di-isopropyl ether | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Ethyl tertiary-butyl ether | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Ethylbenzene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Hexachlorobutadiene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Isopropylbenzene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Methyl tert-Butyl Ether | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Methylene Chloride | ND (0.0340) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Naphthalene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| n-Butylbenzene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| n-Propylbenzene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| sec-Butylbenzene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Styrene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| tert-Butylbenzene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Tertiary-amyl methyl ether | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Tetrachloroethene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-0.5
Date Sampled: 04/29/24 15:00
Percent Solids: 90
Initial Volume: 4.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0272) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Toluene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| trans-1,2-Dichloroethene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| trans-1,3-Dichloropropene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Trichloroethene | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Trichlorofluoromethane | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Vinyl Chloride | ND (0.0136) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Xylene O | ND (0.0068) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Xylene P,M | ND (0.0136) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |
| Xylenes (Total) | ND (0.0136) | | 8260D Low | | 1 | MEK | 05/03/24 15:21 | D4E0068 | DE40324 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *104 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *94 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *101 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *99 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-0.5
Date Sampled: 04/29/24 15:00
Percent Solids: 90
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.029) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 1,2,4-Trichlorobenzene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 1,2-Dichlorobenzene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 1,3-Dichlorobenzene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 1,4-Dichlorobenzene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 2,4,5-Trichlorophenol | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 2,4,6-Trichlorophenol | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 2,4-Dichlorophenol | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 2,4-Dimethylphenol | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 2,4-Dinitrophenol | ND (1.17) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 2,4-Dinitrotoluene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 2,6-Dinitrotoluene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 2-Chloronaphthalene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 2-Chlorophenol | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 2-Methylnaphthalene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 2-Methylphenol | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 2-Nitrophenol | ND (0.583) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 3,3´-Dichlorobenzidine | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 3+4-Methylphenol | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 4-Bromophenyl-phenylether | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 4-Chloroaniline | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| 4-Nitrophenol | ND (1.17) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Acenaphthene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Acenaphthylene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Acetophenone | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Aniline | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Anthracene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Azobenzene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Benzo(a)anthracene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Benzo(a)pyrene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Benzo(b)fluoranthene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-0.5
Date Sampled: 04/29/24 15:00
Percent Solids: 90
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Benzo(k)fluoranthene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| bis(2-Chloroethoxy)methane | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| bis(2-Chloroethyl)ether | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| bis(2-chloroisopropyl)Ether | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| bis(2-Ethylhexyl)phthalate | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Butylbenzylphthalate | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Chrysene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Dibenzo(a,h)Anthracene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Dibenzofuran | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Diethylphthalate | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Dimethylphthalate | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Di-n-butylphthalate | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Di-n-octylphthalate | ND (0.583) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Fluoranthene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Fluorene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Hexachlorobenzene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Hexachlorobutadiene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Hexachloroethane | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Indeno(1,2,3-cd)Pyrene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Isophorone | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Naphthalene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Nitrobenzene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| N-Nitrosodimethylamine | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Pentachlorophenol | ND (1.17) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Phenanthrene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Phenol | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Pyrene | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |
| Pyridine | ND (0.292) | | 8270E | | 1 | TJ | 05/01/24 19:13 | D4E0021 | DE40104 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *70 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-0.5
Date Sampled: 04/29/24 15:00
Percent Solids: 90
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *96 %* | | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *67 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *76 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *66 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *69 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *64 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *83 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-0.5
Date Sampled: 04/29/24 15:00
Percent Solids: 90
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 05/02/24 15:07 | | DD43003 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 05/02/24 15:07 | | DD43003 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 05/02/24 15:07 | | DD43003 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 05/02/24 15:07 | | DD43003 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 05/02/24 15:07 | | DD43003 |
| **Aroclor 1254 [2C]** | **0.08** (0.06) | | 8082A | | 1 | 05/02/24 15:07 | | DD43003 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 05/02/24 15:07 | | DD43003 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 05/02/24 15:07 | | DD43003 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 05/02/24 15:07 | | DD43003 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *56 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *57 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-0.5
Date Sampled: 04/29/24 15:00
Percent Solids: 90
Initial Volume: 20.2g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 4/30/24 19:18

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0028) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| 4,4´-DDE | ND (0.0028) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| 4,4´-DDT | ND (0.0028) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| Aldrin | ND (0.0028) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| alpha-BHC | ND (0.0028) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| alpha-Chlordane | ND (0.0028) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| beta-BHC | ND (0.0028) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| Chlordane (Total) | ND (0.0221) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| delta-BHC | ND (0.0028) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| Dieldrin | ND (0.0028) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| Endosulfan I | ND (0.0028) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| Endosulfan II | ND (0.0028) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| Endosulfan Sulfate | ND (0.0028) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| Endrin | ND (0.0028) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| Endrin Ketone | ND (0.0028) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| gamma-BHC (Lindane) | ND (0.0017) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| gamma-Chlordane | ND (0.0028) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| Heptachlor | ND (0.0028) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| Heptachlor Epoxide | ND (0.0028) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| Hexachlorobenzene | ND (0.0028) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| Methoxychlor | ND (0.0028) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |
| Toxaphene | ND (0.138) | | 8081B | | 1 | 05/01/24 22:46 | D4E0002 | DD43037 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *94 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-0.5
Date Sampled: 04/29/24 15:00
Percent Solids: 90
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 15:58

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/07/24 7:29 | D4E0111 | DE40248 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/07/24 7:29 | D4E0111 | DE40248 |
| 2,4-D | ND (0.051) | | 8151A | | 1 | 05/07/24 7:29 | D4E0111 | DE40248 |
| 2,4-DB | ND (0.051) | | 8151A | | 1 | 05/07/24 7:29 | D4E0111 | DE40248 |
| Dalapon | ND (0.049) | | 8151A | | 1 | 05/07/24 7:29 | D4E0111 | DE40248 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/07/24 7:29 | D4E0111 | DE40248 |
| Dichlorprop | ND (0.051) | | 8151A | | 1 | 05/07/24 7:29 | D4E0111 | DE40248 |
| Dinoseb | ND (0.051) | | 8151A | | 1 | 05/07/24 7:29 | D4E0111 | DE40248 |
| MCPA | ND (2.51) | | 8151A | | 1 | 05/07/24 7:29 | D4E0111 | DE40248 |
| MCPP | ND (2.54) | | 8151A | | 1 | 05/07/24 7:29 | D4E0111 | DE40248 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-0.5
Date Sampled: 04/29/24 15:00
Percent Solids: 90
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/1/24 15:50

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **72.8** (22.8) | | 8100M | | 2 | 05/04/24 3:42 | | DE40105 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *71 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-0.5
Date Sampled: 04/29/24 15:00
Percent Solids: 90

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-14
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 53** (5) | | 9050A | | 1 | EEM | 05/01/24 13:40 | umhos/cm | DE40128 |
| **Corrosivity (pH)** | **6.45** (N/A) | | 9045 | | 1 | JLK | 04/30/24 19:53 | S.U. | DD43035 |
| **Corrosivity (pH) Sample Temp** | **20.5** | | 2550B | | 1 | JLK | 04/30/24 19:53 | °C | DD43035 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 16:36 | °F | DE40144 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 04/30/24 21:35 | ml/5 min | DD43051 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-1
Date Sampled: 04/29/24 14:40
Percent Solids: 91

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-18
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **7.09** (0.78) | | 6010D | | 1 | KJB | 05/01/24 15:21 | 2.8 | 100 | DE40108 |
| **Barium** | **37.8** (0.78) | | 6010D | | 1 | KJB | 05/01/24 15:21 | 2.8 | 100 | DE40108 |
| Cadmium | ND (0.39) | | 6010D | | 1 | KJB | 05/01/24 15:21 | 2.8 | 100 | DE40108 |
| **Chromium** | **23.3** (0.78) | | 6010D | | 1 | KJB | 05/01/24 15:21 | 2.8 | 100 | DE40108 |
| **Lead** | **76.2** (3.92) | | 6010D | | 1 | KJB | 05/01/24 15:21 | 2.8 | 100 | DE40108 |
| **Mercury** | **0.076** (0.034) | | 7471B | | 1 | AFV | 05/01/24 16:21 | 0.64 | 40 | DE40107 |
| Selenium | ND (3.92) | | 6010D | | 1 | KJB | 05/01/24 15:21 | 2.8 | 100 | DE40108 |
| Silver | ND (0.39) | | 6010D | | 1 | KJB | 05/01/24 15:21 | 2.8 | 100 | DE40108 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-1
Date Sampled: 04/29/24 14:40
Percent Solids: 91
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,1,1-Trichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,1,2,2-Tetrachloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,1,2-Trichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,1-Dichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,1-Dichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,1-Dichloropropene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,2,3-Trichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,2,3-Trichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,2,4-Trichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,2,4-Trimethylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,2-Dibromoethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,2-Dichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,2-Dichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,2-Dichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,3,5-Trimethylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,3-Dichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,3-Dichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,4-Dichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 1,4-Dioxane | ND (0.0931) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 2,2-Dichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 2-Butanone | ND (0.0466) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 2-Chlorotoluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 2-Hexanone | ND (0.0466) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 4-Chlorotoluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 4-Isopropyltoluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| 4-Methyl-2-Pentanone | ND (0.0466) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Acetone | ND (0.0466) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Benzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Bromobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-1
Date Sampled: 04/29/24 14:40
Percent Solids: 91
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Bromodichloromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Bromoform | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Bromomethane | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Carbon Disulfide | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Carbon Tetrachloride | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Chlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Chloroethane | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Chloroform | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Chloromethane | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| cis-1,2-Dichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| cis-1,3-Dichloropropene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Dibromochloromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Dibromomethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Dichlorodifluoromethane | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Diethyl Ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Di-isopropyl ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Ethyl tertiary-butyl ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Ethylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Hexachlorobutadiene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Isopropylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Methyl tert-Butyl Ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Methylene Chloride | ND (0.0233) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Naphthalene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| n-Butylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| n-Propylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| sec-Butylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Styrene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| tert-Butylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Tertiary-amyl methyl ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Tetrachloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-1
Date Sampled: 04/29/24 14:40
Percent Solids: 91
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0186) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Toluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| trans-1,2-Dichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| trans-1,3-Dichloropropene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Trichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Trichlorofluoromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Vinyl Chloride | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Xylene O | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Xylene P,M | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |
| Xylenes (Total) | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/03/24 15:47 | D4E0068 | DE40324 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *106 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *97 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *103 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *97 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-1
Date Sampled: 04/29/24 14:40
Percent Solids: 91
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.030** (0.029) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 1,2,4-Trichlorobenzene | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 1,2-Dichlorobenzene | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 1,3-Dichlorobenzene | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 1,4-Dichlorobenzene | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 2,4,5-Trichlorophenol | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 2,4,6-Trichlorophenol | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 2,4-Dichlorophenol | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 2,4-Dimethylphenol | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 2,4-Dinitrophenol | ND (1.16) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 2,4-Dinitrotoluene | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 2,6-Dinitrotoluene | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 2-Chloronaphthalene | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 2-Chlorophenol | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 2-Methylnaphthalene | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 2-Methylphenol | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 2-Nitrophenol | ND (0.578) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 3,3´-Dichlorobenzidine | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 3+4-Methylphenol | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 4-Bromophenyl-phenylether | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 4-Chloroaniline | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| 4-Nitrophenol | ND (1.16) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Acenaphthene | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Acenaphthylene | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Acetophenone | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Aniline | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| **Anthracene** | **0.530** (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Azobenzene | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| **Benzo(a)anthracene** | **0.756** (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| **Benzo(a)pyrene** | **0.694** (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| **Benzo(b)fluoranthene** | **0.718** (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-1
Date Sampled: 04/29/24 14:40
Percent Solids: 91
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Benzo(g,h,i)perylene** | **0.407** (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| **Benzo(k)fluoranthene** | **0.289** (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| bis(2-Chloroethoxy)methane | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| bis(2-Chloroethyl)ether | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| bis(2-chloroisopropyl)Ether | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| bis(2-Ethylhexyl)phthalate | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Butylbenzylphthalate | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| **Chrysene** | **0.721** (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Dibenzo(a,h)Anthracene | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Dibenzofuran | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Diethylphthalate | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Dimethylphthalate | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Di-n-butylphthalate | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Di-n-octylphthalate | ND (0.578) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| **Fluoranthene** | **1.85** (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Fluorene | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Hexachlorobenzene | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Hexachlorobutadiene | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Hexachloroethane | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| **Indeno(1,2,3-cd)Pyrene** | **0.403** (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Isophorone | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Naphthalene | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Nitrobenzene | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| N-Nitrosodimethylamine | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Pentachlorophenol | ND (1.16) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| **Phenanthrene** | **1.97** (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Phenol | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| **Pyrene** | **1.51** (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |
| Pyridine | ND (0.289) | | 8270E | | 1 | TJ | 05/01/24 20:41 | D4E0021 | DE40104 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *80 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-1
Date Sampled: 04/29/24 14:40
Percent Solids: 91
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *111 %* | | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *79 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *88 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *77 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *79 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *76 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *97 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-1
Date Sampled: 04/29/24 14:40
Percent Solids: 91
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 05/02/24 15:27 | | DD43003 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 05/02/24 15:27 | | DD43003 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 05/02/24 15:27 | | DD43003 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 05/02/24 15:27 | | DD43003 |
| **Aroclor 1248** | **0.1** (0.06) | | 8082A | | 1 | 05/02/24 15:27 | | DD43003 |
| **Aroclor 1254** | **0.6** (0.06) | | 8082A | | 1 | 05/02/24 15:27 | | DD43003 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 05/02/24 15:27 | | DD43003 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 05/02/24 15:27 | | DD43003 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 05/02/24 15:27 | | DD43003 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-1
Date Sampled: 04/29/24 14:40
Percent Solids: 91
Initial Volume: 19.2g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 4/30/24 19:18

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0029) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| 4,4´-DDE | ND (0.0029) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| 4,4´-DDT | ND (0.0029) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| Aldrin | ND (0.0029) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| alpha-BHC | ND (0.0029) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| alpha-Chlordane | ND (0.0029) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| beta-BHC | ND (0.0029) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| Chlordane (Total) | ND (0.0229) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| delta-BHC | ND (0.0029) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| Dieldrin | ND (0.0029) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| Endosulfan I | ND (0.0029) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| Endosulfan II | ND (0.0029) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| Endosulfan Sulfate | ND (0.0029) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| Endrin | ND (0.0029) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| Endrin Ketone | ND (0.0029) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| gamma-BHC (Lindane) | ND (0.0017) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| gamma-Chlordane | ND (0.0029) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| Heptachlor | ND (0.0029) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| Heptachlor Epoxide | ND (0.0029) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| Hexachlorobenzene | ND (0.0029) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| Methoxychlor | ND (0.0029) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |
| Toxaphene | ND (0.143) | | 8081B | | 1 | 05/01/24 23:14 | D4E0002 | DD43037 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *81 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *64 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-1
Date Sampled: 04/29/24 14:40
Percent Solids: 91
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 15:58

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/07/24 7:58 | D4E0111 | DE40248 |
| 2,4,5-TP (Silvex) [2C] | ND (0.010) | | 8151A | | 1 | 05/07/24 7:58 | D4E0111 | DE40248 |
| 2,4-D [2C] | ND (0.051) | | 8151A | | 1 | 05/07/24 7:58 | D4E0111 | DE40248 |
| 2,4-DB | ND (0.051) | | 8151A | | 1 | 05/07/24 7:58 | D4E0111 | DE40248 |
| Dalapon | ND (0.049) | | 8151A | | 1 | 05/07/24 7:58 | D4E0111 | DE40248 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/07/24 7:58 | D4E0111 | DE40248 |
| Dichlorprop | ND (0.051) | | 8151A | | 1 | 05/07/24 7:58 | D4E0111 | DE40248 |
| Dinoseb | ND (0.051) | | 8151A | | 1 | 05/07/24 7:58 | D4E0111 | DE40248 |
| MCPA [2C] | ND (2.50) | | 8151A | | 1 | 05/07/24 7:58 | D4E0111 | DE40248 |
| MCPP [2C] | ND (2.53) | | 8151A | | 1 | 05/07/24 7:58 | D4E0111 | DE40248 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-1
Date Sampled: 04/29/24 14:40
Percent Solids: 91
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/1/24 10:50

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **19.8** (10.8) | | 8100M | | 1 | 05/02/24 19:16 | | DE40105 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *61 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-1
Date Sampled: 04/29/24 14:40
Percent Solids: 91

ESS Laboratory Work Order: 24D1044
ESS Laboratory Sample ID: 24D1044-18
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 30** (5) | | 9050A | | 1 | EEM | 05/01/24 13:40 | umhos/cm | DE40128 |
| **Corrosivity (pH)** | **6.62** (N/A) | | 9045 | | 1 | JLK | 04/30/24 19:53 | S.U. | DD43035 |
| **Corrosivity (pH) Sample Temp** | **20.4** | | 2550B | | 1 | JLK | 04/30/24 19:53 | °C | DD43035 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 16:36 | °F | DE40144 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 04/30/24 21:35 | ml/5 min | DD43051 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/01/24 15:12 | mg/kg | DD43048 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DE40107 - 245.1/7470A** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Mercury | ND | 0.030 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Mercury | 26.6 | 3.00 | mg/kg wet | 25.50 | | 104 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Mercury | 28.1 | 3.19 | mg/kg wet | 25.50 | | 110 | 80-120 | 5 | 30 | |
| **Batch DE40108 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Arsenic | ND | 1.00 | mg/kg wet | | | | | | | |
| Barium | ND | 1.00 | mg/kg wet | | | | | | | |
| Cadmium | ND | 0.50 | mg/kg wet | | | | | | | |
| Chromium | ND | 1.00 | mg/kg wet | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| Selenium | ND | 5.00 | mg/kg wet | | | | | | | |
| Silver | ND | 0.50 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Arsenic | 61.5 | 2.99 | mg/kg wet | 75.60 | | 81 | 73-127 | | | |
| Barium | 646 | 2.99 | mg/kg wet | 372.0 | | 174 | 40-297 | | | |
| Cadmium | 201 | 1.49 | mg/kg wet | 259.0 | | 77 | 69-131 | | | |
| Chromium | 128 | 2.99 | mg/kg wet | 156.0 | | 82 | 74-126 | | | |
| Lead | 177 | 14.9 | mg/kg wet | 225.0 | | 79 | 72-128 | | | |
| Selenium | 63.7 | 14.9 | mg/kg wet | 82.70 | | 77 | 70-129 | | | |
| Silver | 40.9 | 1.49 | mg/kg wet | 51.00 | | 80 | 57-143 | | | |
| **LCS Dup** | | | | | | | | | | |
| Arsenic | 70.4 | 3.33 | mg/kg wet | 75.60 | | 93 | 73-127 | 13 | 30 | |
| Barium | 794 | 3.33 | mg/kg wet | 372.0 | | 213 | 40-297 | 21 | 30 | |
| Cadmium | 229 | 1.67 | mg/kg wet | 259.0 | | 88 | 69-131 | 13 | 30 | |
| Chromium | 147 | 3.33 | mg/kg wet | 156.0 | | 94 | 74-126 | 13 | 30 | |
| Lead | 201 | 16.7 | mg/kg wet | 225.0 | | 89 | 72-128 | 13 | 30 | |
| Selenium | 70.4 | 16.7 | mg/kg wet | 82.70 | | 85 | 70-129 | 10 | 30 | |
| Silver | 47.0 | 1.67 | mg/kg wet | 51.00 | | 92 | 57-143 | 14 | 30 | |
| **1311 TCLP Metals** | | | | | | | | | | |
| **Batch DE40325 - 3005A_TCLP** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 0.05 | mg/L | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 0.46 | 0.05 | mg/L | 0.5000 | | 92 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 0.46 | 0.05 | mg/L | 0.5000 | | 91 | 80-120 | 0.6 | 20 | |
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40133 - 5035** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40133 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dioxane | ND | 0.100 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Acetone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromoform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Carbon Disulfide | ND | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Chloroform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40133 - 5035** | | | | | | | | | | |
| Dibromomethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methylene Chloride | ND | 0.0250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.0050 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 0.0200 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.0100 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.0050 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.0100 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0567* | | mg/kg wet | *0.05000* | | *113* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0505* | | mg/kg wet | *0.05000* | | *101* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0527* | | mg/kg wet | *0.05000* | | *105* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0484* | | mg/kg wet | *0.05000* | | *97* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0519 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| 1,1,1-Trichloroethane | 0.0546 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 40-160 | | | |
| 1,1,2-Trichloroethane | 0.0586 | 0.0050 | mg/kg wet | 0.05000 | | 117 | 70-130 | | | |
| 1,1-Dichloroethane | 0.0559 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | | | |
| 1,1-Dichloroethene | 0.0538 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| 1,1-Dichloropropene | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| 1,2,3-Trichloropropane | 0.0446 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0452 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| 1,2-Dibromoethane | 0.0533 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40133 - 5035** | | | | | | | | | | |
| 1,2-Dichlorobenzene | 0.0496 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,2-Dichloroethane | 0.0621 | 0.0050 | mg/kg wet | 0.05000 | | 124 | 70-130 | | | |
| 1,2-Dichloropropane | 0.0578 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0502 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,3-Dichlorobenzene | 0.0497 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,3-Dichloropropane | 0.0574 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | | | |
| 1,4-Dichlorobenzene | 0.0500 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,4-Dioxane | 1.07 | 0.100 | mg/kg wet | 1.000 | | 107 | 70-130 | | | |
| 2,2-Dichloropropane | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| 2-Butanone | 0.278 | 0.0500 | mg/kg wet | 0.2500 | | 111 | 40-160 | | | |
| 2-Chlorotoluene | 0.0510 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 2-Hexanone | 0.235 | 0.0500 | mg/kg wet | 0.2500 | | 94 | 40-160 | | | |
| 4-Chlorotoluene | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 4-Isopropyltoluene | 0.0469 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 0.251 | 0.0500 | mg/kg wet | 0.2500 | | 101 | 40-160 | | | |
| Acetone | 0.269 | 0.0500 | mg/kg wet | 0.2500 | | 107 | 40-160 | | | |
| Benzene | 0.0540 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Bromobenzene | 0.0514 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Bromochloromethane | 0.0569 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | | | |
| Bromodichloromethane | 0.0654 | 0.0050 | mg/kg wet | 0.05000 | | 131 | 70-130 | | | B+ |
| Bromoform | 0.0451 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 40-160 | | | |
| Bromomethane | 0.0484 | 0.0100 | mg/kg wet | 0.05000 | | 97 | 40-160 | | | |
| Carbon Disulfide | 0.0585 | 0.0050 | mg/kg wet | 0.05000 | | 117 | 70-130 | | | |
| Carbon Tetrachloride | 0.0529 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Chlorobenzene | 0.0529 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Chloroethane | 0.0459 | 0.0100 | mg/kg wet | 0.05000 | | 92 | 40-160 | | | |
| Chloroform | 0.0578 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | | | |
| Chloromethane | 0.0524 | 0.0100 | mg/kg wet | 0.05000 | | 105 | 40-160 | | | |
| cis-1,2-Dichloroethene | 0.0563 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | | | |
| cis-1,3-Dichloropropene | 0.0597 | 0.0050 | mg/kg wet | 0.05000 | | 119 | 40-160 | | | |
| Dibromochloromethane | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 40-160 | | | |
| Dibromomethane | 0.0606 | 0.0050 | mg/kg wet | 0.05000 | | 121 | 70-130 | | | |
| Dichlorodifluoromethane | 0.0346 | 0.0100 | mg/kg wet | 0.05000 | | 69 | 40-160 | | | |
| Diethyl Ether | 0.0650 | 0.0050 | mg/kg wet | 0.05000 | | 130 | 70-130 | | | |
| Di-isopropyl ether | 0.0626 | 0.0050 | mg/kg wet | 0.05000 | | 125 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 0.0616 | 0.0050 | mg/kg wet | 0.05000 | | 123 | 70-130 | | | |
| Ethylbenzene | 0.0514 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Hexachlorobutadiene | 0.0439 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 40-160 | | | |
| Isopropylbenzene | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Methyl tert-Butyl Ether | 0.0609 | 0.0050 | mg/kg wet | 0.05000 | | 122 | 70-130 | | | |
| Methylene Chloride | 0.0559 | 0.0250 | mg/kg wet | 0.05000 | | 112 | 70-130 | | | |
| Naphthalene | 0.0420 | 0.0050 | mg/kg wet | 0.05000 | | 84 | 40-160 | | | |
| n-Butylbenzene | 0.0493 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| n-Propylbenzene | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| sec-Butylbenzene | 0.0468 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40133 - 5035** | | | | | | | | | | |
| Styrene | 0.0526 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 40-160 | | | |
| tert-Butylbenzene | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| Tertiary-amyl methyl ether | 0.0602 | 0.0050 | mg/kg wet | 0.05000 | | 120 | 70-130 | | | |
| Tetrachloroethene | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| Tetrahydrofuran | 0.0486 | 0.0200 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| Toluene | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| trans-1,2-Dichloroethene | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| trans-1,3-Dichloropropene | 0.0572 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | | | |
| Trichloroethene | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Trichlorofluoromethane | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 40-160 | | | |
| Vinyl Chloride | 0.0503 | 0.0100 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Xylene O | 0.0540 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Xylene P,M | 0.107 | 0.0100 | mg/kg wet | 0.1000 | | 107 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0552* | | mg/kg wet | *0.05000* | | *110* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0506* | | mg/kg wet | *0.05000* | | *101* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0529* | | mg/kg wet | *0.05000* | | *106* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0489* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0535 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 3 | 20 | |
| 1,1,1-Trichloroethane | 0.0570 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | 4 | 20 | |
| 1,1,2,2-Tetrachloroethane | 0.0535 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 40-160 | 0.8 | 20 | |
| 1,1,2-Trichloroethane | 0.0611 | 0.0050 | mg/kg wet | 0.05000 | | 122 | 70-130 | 4 | 20 | |
| 1,1-Dichloroethane | 0.0578 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | 3 | 20 | |
| 1,1-Dichloroethene | 0.0563 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | 5 | 20 | |
| 1,1-Dichloropropene | 0.0552 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 3 | 20 | |
| 1,2,3-Trichlorobenzene | 0.0479 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 2 | 20 | |
| 1,2,3-Trichloropropane | 0.0456 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | 2 | 20 | |
| 1,2,4-Trichlorobenzene | 0.0489 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 1 | 20 | |
| 1,2,4-Trimethylbenzene | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 1 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 5 | 20 | |
| 1,2-Dibromoethane | 0.0558 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 5 | 20 | |
| 1,2-Dichlorobenzene | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 3 | 20 | |
| 1,2-Dichloroethane | 0.0641 | 0.0050 | mg/kg wet | 0.05000 | | 128 | 70-130 | 3 | 20 | |
| 1,2-Dichloropropane | 0.0589 | 0.0050 | mg/kg wet | 0.05000 | | 118 | 70-130 | 2 | 20 | |
| 1,3,5-Trimethylbenzene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 0.8 | 20 | |
| 1,3-Dichlorobenzene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 0.5 | 20 | |
| 1,3-Dichloropropane | 0.0591 | 0.0050 | mg/kg wet | 0.05000 | | 118 | 70-130 | 3 | 20 | |
| 1,4-Dichlorobenzene | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| 1,4-Dioxane | 1.18 | 0.100 | mg/kg wet | 1.000 | | 118 | 70-130 | 10 | 20 | |
| 2,2-Dichloropropane | 0.0563 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | 4 | 20 | |
| 2-Butanone | 0.300 | 0.0500 | mg/kg wet | 0.2500 | | 120 | 40-160 | 8 | 20 | |
| 2-Chlorotoluene | 0.0510 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 0.04 | 20 | |
| 2-Hexanone | 0.261 | 0.0500 | mg/kg wet | 0.2500 | | 104 | 40-160 | 10 | 20 | |
| 4-Chlorotoluene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 1 | 20 | |
| 4-Isopropyltoluene | 0.0468 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 0.2 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40133 - 5035** | | | | | | | | | | |
| 4-Methyl-2-Pentanone | 0.276 | 0.0500 | mg/kg wet | 0.2500 | | 111 | 40-160 | 9 | 20 | |
| Acetone | 0.301 | 0.0500 | mg/kg wet | 0.2500 | | 120 | 40-160 | 11 | 20 | |
| Benzene | 0.0559 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 3 | 20 | |
| Bromobenzene | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 1 | 20 | |
| Bromochloromethane | 0.0581 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | 2 | 20 | |
| Bromodichloromethane | 0.0675 | 0.0050 | mg/kg wet | 0.05000 | | 135 | 70-130 | 3 | 20 | B+ |
| Bromoform | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 40-160 | 4 | 20 | |
| Bromomethane | 0.0506 | 0.0100 | mg/kg wet | 0.05000 | | 101 | 40-160 | 4 | 20 | |
| Carbon Disulfide | 0.0611 | 0.0050 | mg/kg wet | 0.05000 | | 122 | 70-130 | 4 | 20 | |
| Carbon Tetrachloride | 0.0555 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | 5 | 20 | |
| Chlorobenzene | 0.0545 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 3 | 20 | |
| Chloroethane | 0.0474 | 0.0100 | mg/kg wet | 0.05000 | | 95 | 40-160 | 3 | 20 | |
| Chloroform | 0.0594 | 0.0050 | mg/kg wet | 0.05000 | | 119 | 70-130 | 3 | 20 | |
| Chloromethane | 0.0541 | 0.0100 | mg/kg wet | 0.05000 | | 108 | 40-160 | 3 | 20 | |
| cis-1,2-Dichloroethene | 0.0580 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | 3 | 20 | |
| cis-1,3-Dichloropropene | 0.0619 | 0.0050 | mg/kg wet | 0.05000 | | 124 | 40-160 | 3 | 20 | |
| Dibromochloromethane | 0.0527 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 40-160 | 4 | 20 | |
| Dibromomethane | 0.0632 | 0.0050 | mg/kg wet | 0.05000 | | 126 | 70-130 | 4 | 20 | |
| Dichlorodifluoromethane | 0.0352 | 0.0100 | mg/kg wet | 0.05000 | | 70 | 40-160 | 2 | 20 | |
| Diethyl Ether | 0.0666 | 0.0050 | mg/kg wet | 0.05000 | | 133 | 70-130 | 2 | 20 | B+ |
| Di-isopropyl ether | 0.0644 | 0.0050 | mg/kg wet | 0.05000 | | 129 | 70-130 | 3 | 20 | |
| Ethyl tertiary-butyl ether | 0.0637 | 0.0050 | mg/kg wet | 0.05000 | | 127 | 70-130 | 3 | 20 | |
| Ethylbenzene | 0.0535 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 4 | 20 | |
| Hexachlorobutadiene | 0.0450 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 40-160 | 2 | 20 | |
| Isopropylbenzene | 0.0528 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 0.2 | 20 | |
| Methyl tert-Butyl Ether | 0.0630 | 0.0050 | mg/kg wet | 0.05000 | | 126 | 70-130 | 3 | 20 | |
| Methylene Chloride | 0.0572 | 0.0250 | mg/kg wet | 0.05000 | | 114 | 70-130 | 2 | 20 | |
| Naphthalene | 0.0427 | 0.0050 | mg/kg wet | 0.05000 | | 85 | 40-160 | 2 | 20 | |
| n-Butylbenzene | 0.0492 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 0.08 | 20 | |
| n-Propylbenzene | 0.0511 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 0.7 | 20 | |
| sec-Butylbenzene | 0.0466 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 0.3 | 20 | |
| Styrene | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 40-160 | 3 | 20 | |
| tert-Butylbenzene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 0.1 | 20 | |
| Tertiary-amyl methyl ether | 0.0626 | 0.0050 | mg/kg wet | 0.05000 | | 125 | 70-130 | 4 | 20 | |
| Tetrachloroethene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 4 | 20 | |
| Tetrahydrofuran | 0.0552 | 0.0200 | mg/kg wet | 0.05000 | | 110 | 70-130 | 13 | 20 | |
| Toluene | 0.0562 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 4 | 20 | |
| trans-1,2-Dichloroethene | 0.0564 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | 4 | 20 | |
| trans-1,3-Dichloropropene | 0.0587 | 0.0050 | mg/kg wet | 0.05000 | | 117 | 70-130 | 3 | 20 | |
| Trichloroethene | 0.0568 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | 5 | 20 | |
| Trichlorofluoromethane | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 40-160 | 4 | 20 | |
| Vinyl Chloride | 0.0520 | 0.0100 | mg/kg wet | 0.05000 | | 104 | 70-130 | 3 | 20 | |
| Xylene O | 0.0562 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 4 | 20 | |
| Xylene P,M | 0.111 | 0.0100 | mg/kg wet | 0.1000 | | 111 | 70-130 | 3 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0553* | | mg/kg wet | *0.05000* | | *111* | *70-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40133 - 5035** | | | | | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0511* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0526* | | mg/kg wet | *0.05000* | | *105* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0485* | | mg/kg wet | *0.05000* | | *97* | *70-130* | | | |
| **Batch DE40324 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dioxane | ND | 0.100 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Acetone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromoform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Carbon Disulfide | ND | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.0100 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40324 - 5035** | | | | | | | | | | |
| Chloroform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromomethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methylene Chloride | ND | 0.0250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.0050 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 0.0200 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.0100 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.0050 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.0100 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0496* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0485* | | mg/kg wet | *0.05000* | | *97* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0487* | | mg/kg wet | *0.05000* | | *97* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0489* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0497 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,1,1-Trichloroethane | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 0.0434 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 40-160 | | | |
| 1,1,2-Trichloroethane | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| 1,1-Dichloroethane | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| 1,1-Dichloroethene | 0.0502 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,1-Dichloropropene | 0.0484 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 0.0439 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40324 - 5035** | | | | | | | | | | |
| 1,2,3-Trichloropropane | 0.0378 | 0.0050 | mg/kg wet | 0.05000 | | 76 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0463 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0364 | 0.0050 | mg/kg wet | 0.05000 | | 73 | 70-130 | | | |
| 1,2-Dibromoethane | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| 1,2-Dichlorobenzene | 0.0431 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 70-130 | | | |
| 1,2-Dichloroethane | 0.0473 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| 1,2-Dichloropropane | 0.0489 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0459 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| 1,3-Dichlorobenzene | 0.0445 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | | | |
| 1,3-Dichloropropane | 0.0484 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| 1,4-Dichlorobenzene | 0.0441 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | | | |
| 1,4-Dioxane | 0.929 | 0.100 | mg/kg wet | 1.000 | | 93 | 70-130 | | | |
| 2,2-Dichloropropane | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 2-Butanone | 0.260 | 0.0500 | mg/kg wet | 0.2500 | | 104 | 40-160 | | | |
| 2-Chlorotoluene | 0.0454 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| 2-Hexanone | 0.240 | 0.0500 | mg/kg wet | 0.2500 | | 96 | 40-160 | | | |
| 4-Chlorotoluene | 0.0448 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| 4-Isopropyltoluene | 0.0438 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 0.227 | 0.0500 | mg/kg wet | 0.2500 | | 91 | 40-160 | | | |
| Acetone | 0.316 | 0.0500 | mg/kg wet | 0.2500 | | 126 | 40-160 | | | |
| Benzene | 0.0484 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| Bromobenzene | 0.0456 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| Bromochloromethane | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| Bromodichloromethane | 0.0568 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | | | |
| Bromoform | 0.0381 | 0.0050 | mg/kg wet | 0.05000 | | 76 | 40-160 | | | |
| Bromomethane | 0.0483 | 0.0100 | mg/kg wet | 0.05000 | | 97 | 40-160 | | | |
| Carbon Disulfide | 0.0534 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| Carbon Tetrachloride | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Chlorobenzene | 0.0489 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Chloroethane | 0.0498 | 0.0100 | mg/kg wet | 0.05000 | | 100 | 40-160 | | | |
| Chloroform | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Chloromethane | 0.0438 | 0.0100 | mg/kg wet | 0.05000 | | 88 | 40-160 | | | |
| cis-1,2-Dichloroethene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| cis-1,3-Dichloropropene | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 40-160 | | | |
| Dibromochloromethane | 0.0462 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 40-160 | | | |
| Dibromomethane | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Dichlorodifluoromethane | 0.0303 | 0.0100 | mg/kg wet | 0.05000 | | 61 | 40-160 | | | |
| Diethyl Ether | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Di-isopropyl ether | 0.0520 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 0.0514 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Ethylbenzene | 0.0492 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Hexachlorobutadiene | 0.0436 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 40-160 | | | |
| Isopropylbenzene | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Methyl tert-Butyl Ether | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40324 - 5035** | | | | | | | | | | |
| Methylene Chloride | 0.0464 | 0.0250 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |
| Naphthalene | 0.0421 | 0.0050 | mg/kg wet | 0.05000 | | 84 | 40-160 | | | |
| n-Butylbenzene | 0.0455 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| n-Propylbenzene | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| sec-Butylbenzene | 0.0433 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 70-130 | | | |
| Styrene | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 40-160 | | | |
| tert-Butylbenzene | 0.0452 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| Tertiary-amyl methyl ether | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Tetrachloroethene | 0.0398 | 0.0050 | mg/kg wet | 0.05000 | | 80 | 70-130 | | | |
| Tetrahydrofuran | 0.0467 | 0.0200 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |
| Toluene | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| trans-1,2-Dichloroethene | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| trans-1,3-Dichloropropene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| Trichloroethene | 0.0479 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Trichlorofluoromethane | 0.0478 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 40-160 | | | |
| Vinyl Chloride | 0.0451 | 0.0100 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| Xylene O | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Xylene P,M | 0.103 | 0.0100 | mg/kg wet | 0.1000 | | 103 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0471* | | mg/kg wet | *0.05000* | | *94* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0501* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0486* | | mg/kg wet | *0.05000* | | *97* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0488* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 4 | 20 | |
| 1,1,1-Trichloroethane | 0.0568 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | 11 | 20 | |
| 1,1,2,2-Tetrachloroethane | 0.0497 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 40-160 | 14 | 20 | |
| 1,1,2-Trichloroethane | 0.0517 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 6 | 20 | |
| 1,1-Dichloroethane | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 8 | 20 | |
| 1,1-Dichloroethene | 0.0564 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | 12 | 20 | |
| 1,1-Dichloropropene | 0.0541 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 11 | 20 | |
| 1,2,3-Trichlorobenzene | 0.0483 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 10 | 20 | |
| 1,2,3-Trichloropropane | 0.0439 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | 15 | 20 | |
| 1,2,4-Trichlorobenzene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 9 | 20 | |
| 1,2,4-Trimethylbenzene | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 10 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 0.0450 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | 21 | 20 | D+ |
| 1,2-Dibromoethane | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 8 | 20 | |
| 1,2-Dichlorobenzene | 0.0468 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 8 | 20 | |
| 1,2-Dichloroethane | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 6 | 20 | |
| 1,2-Dichloropropane | 0.0514 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 5 | 20 | |
| 1,3,5-Trimethylbenzene | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 11 | 20 | |
| 1,3-Dichlorobenzene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 9 | 20 | |
| 1,3-Dichloropropane | 0.0514 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 6 | 20 | |
| 1,4-Dichlorobenzene | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 9 | 20 | |
| 1,4-Dioxane | 1.11 | 0.100 | mg/kg wet | 1.000 | | 111 | 70-130 | 18 | 20 | |
| 2,2-Dichloropropane | 0.0568 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | 10 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40324 - 5035** | | | | | | | | | | |
| 2-Butanone | 0.261 | 0.0500 | mg/kg wet | 0.2500 | | 104 | 40-160 | 0.3 | 20 | |
| 2-Chlorotoluene | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 10 | 20 | |
| 2-Hexanone | 0.261 | 0.0500 | mg/kg wet | 0.2500 | | 105 | 40-160 | 9 | 20 | |
| 4-Chlorotoluene | 0.0497 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 10 | 20 | |
| 4-Isopropyltoluene | 0.0495 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 12 | 20 | |
| 4-Methyl-2-Pentanone | 0.265 | 0.0500 | mg/kg wet | 0.2500 | | 106 | 40-160 | 16 | 20 | |
| Acetone | 0.245 | 0.0500 | mg/kg wet | 0.2500 | | 98 | 40-160 | 25 | 20 | D+ |
| Benzene | 0.0524 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 8 | 20 | |
| Bromobenzene | 0.0493 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 8 | 20 | |
| Bromochloromethane | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 6 | 20 | |
| Bromodichloromethane | 0.0597 | 0.0050 | mg/kg wet | 0.05000 | | 119 | 70-130 | 5 | 20 | |
| Bromoform | 0.0408 | 0.0050 | mg/kg wet | 0.05000 | | 82 | 40-160 | 7 | 20 | |
| Bromomethane | 0.0526 | 0.0100 | mg/kg wet | 0.05000 | | 105 | 40-160 | 9 | 20 | |
| Carbon Disulfide | 0.0601 | 0.0050 | mg/kg wet | 0.05000 | | 120 | 70-130 | 12 | 20 | |
| Carbon Tetrachloride | 0.0562 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 11 | 20 | |
| Chlorobenzene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 7 | 20 | |
| Chloroethane | 0.0548 | 0.0100 | mg/kg wet | 0.05000 | | 110 | 40-160 | 9 | 20 | |
| Chloroform | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 7 | 20 | |
| Chloromethane | 0.0485 | 0.0100 | mg/kg wet | 0.05000 | | 97 | 40-160 | 10 | 20 | |
| cis-1,2-Dichloroethene | 0.0538 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 7 | 20 | |
| cis-1,3-Dichloropropene | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 40-160 | 6 | 20 | |
| Dibromochloromethane | 0.0483 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 40-160 | 4 | 20 | |
| Dibromomethane | 0.0529 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 8 | 20 | |
| Dichlorodifluoromethane | 0.0344 | 0.0100 | mg/kg wet | 0.05000 | | 69 | 40-160 | 12 | 20 | |
| Diethyl Ether | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 6 | 20 | |
| Di-isopropyl ether | 0.0544 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 4 | 20 | |
| Ethyl tertiary-butyl ether | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 4 | 20 | |
| Ethylbenzene | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 8 | 20 | |
| Hexachlorobutadiene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 40-160 | 12 | 20 | |
| Isopropylbenzene | 0.0569 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | 12 | 20 | |
| Methyl tert-Butyl Ether | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 6 | 20 | |
| Methylene Chloride | 0.0489 | 0.0250 | mg/kg wet | 0.05000 | | 98 | 70-130 | 5 | 20 | |
| Naphthalene | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 40-160 | 14 | 20 | |
| n-Butylbenzene | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 13 | 20 | |
| n-Propylbenzene | 0.0533 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 13 | 20 | |
| sec-Butylbenzene | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 12 | 20 | |
| Styrene | 0.0522 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 40-160 | 6 | 20 | |
| tert-Butylbenzene | 0.0510 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 12 | 20 | |
| Tertiary-amyl methyl ether | 0.0535 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 5 | 20 | |
| Tetrachloroethene | 0.0401 | 0.0050 | mg/kg wet | 0.05000 | | 80 | 70-130 | 1 | 20 | |
| Tetrahydrofuran | 0.0569 | 0.0200 | mg/kg wet | 0.05000 | | 114 | 70-130 | 20 | 20 | |
| Toluene | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 8 | 20 | |
| trans-1,2-Dichloroethene | 0.0550 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 9 | 20 | |
| trans-1,3-Dichloropropene | 0.0519 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 4 | 20 | |
| Trichloroethene | 0.0529 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 10 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40324 - 5035** | | | | | | | | | | |
| Trichlorofluoromethane | 0.0540 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 40-160 | 12 | 20 | |
| Vinyl Chloride | 0.0509 | 0.0100 | mg/kg wet | 0.05000 | | 102 | 70-130 | 12 | 20 | |
| Xylene O | 0.0543 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 7 | 20 | |
| Xylene P,M | 0.112 | 0.0100 | mg/kg wet | 0.1000 | | 112 | 70-130 | 8 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0482* | | mg/kg wet | *0.05000* | | *96* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0488* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0489* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0488* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DD43017 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DD43017 - 3546** | | | | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyridine | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.34* | | mg/kg wet | *2.500* | | *94* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *5.07* | | mg/kg wet | *3.750* | | *135* | *30-130* | | | S+ |
| *Surrogate: 2-Chlorophenol-d4* | *3.29* | | mg/kg wet | *3.750* | | *88* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.52* | | mg/kg wet | *2.500* | | *101* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.31* | | mg/kg wet | *3.750* | | *88* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.26* | | mg/kg wet | *2.500* | | *90* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.19* | | mg/kg wet | *3.750* | | *85* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.83* | | mg/kg wet | *2.500* | | *113* | *30-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.44 | 0.025 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| 1,2-Dichlorobenzene | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| 1,3-Dichlorobenzene | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.60 | 0.250 | mg/kg wet | 2.500 | | 104 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 30-130 | | | |
| 2,4-Dichlorophenol | 2.39 | 0.250 | mg/kg wet | 2.500 | | 95 | 30-130 | | | |
| 2,4-Dimethylphenol | 3.82 | 0.250 | mg/kg wet | 2.500 | | 153 | 30-130 | | | B+ |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DD43017 - 3546** | | | | | | | | | | |
| 2,4-Dinitrophenol | 1.91 | 1.00 | mg/kg wet | 2.500 | | 76 | 15-140 | | | |
| 2,4-Dinitrotoluene | 2.82 | 0.250 | mg/kg wet | 2.500 | | 113 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.57 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | | | |
| 2-Chloronaphthalene | 2.58 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | | | |
| 2-Chlorophenol | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 30-130 | | | |
| 2-Methylnaphthalene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| 2-Methylphenol | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 15-140 | | | |
| 2-Nitrophenol | 2.14 | 0.500 | mg/kg wet | 2.500 | | 86 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| 3+4-Methylphenol | 5.21 | 0.250 | mg/kg wet | 5.000 | | 104 | 15-140 | | | |
| 4-Bromophenyl-phenylether | 2.64 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| 4-Chloroaniline | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 15-140 | | | |
| 4-Nitrophenol | 2.34 | 1.00 | mg/kg wet | 2.500 | | 94 | 15-140 | | | |
| Acenaphthene | 2.57 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | | | |
| Acenaphthylene | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| Acetophenone | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| Aniline | 2.54 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Anthracene | 2.75 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | | | |
| Azobenzene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Benzo(a)anthracene | 2.75 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | | | |
| Benzo(a)pyrene | 2.84 | 0.250 | mg/kg wet | 2.500 | | 114 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.76 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 2.16 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Butylbenzylphthalate | 2.61 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Chrysene | 2.64 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Dibenzofuran | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| Diethylphthalate | 2.69 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | | | |
| Dimethylphthalate | 2.66 | 0.250 | mg/kg wet | 2.500 | | 106 | 15-140 | | | |
| Di-n-butylphthalate | 2.74 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | | | |
| Di-n-octylphthalate | 2.90 | 0.500 | mg/kg wet | 2.500 | | 116 | 40-140 | | | |
| Fluoranthene | 2.81 | 0.250 | mg/kg wet | 2.500 | | 113 | 40-140 | | | |
| Fluorene | 2.65 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| Hexachlorobenzene | 2.50 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Hexachlorobutadiene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Hexachloroethane | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| Isophorone | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Naphthalene | 2.16 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Nitrobenzene | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DD43017 - 3546** | | | | | | | | | | |
| N-Nitrosodimethylamine | 2.26 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Pentachlorophenol | 2.35 | 1.00 | mg/kg wet | 2.500 | | 94 | 15-140 | | | |
| Phenanthrene | 2.58 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | | | |
| Phenol | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 15-140 | | | |
| Pyrene | 2.76 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | | | |
| Pyridine | 2.55 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.50* | | mg/kg wet | *2.500* | | *100* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.05* | | mg/kg wet | *3.750* | | *108* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.87* | | mg/kg wet | *3.750* | | *103* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.59* | | mg/kg wet | *2.500* | | *104* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.93* | | mg/kg wet | *3.750* | | *105* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.36* | | mg/kg wet | *2.500* | | *94* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.90* | | mg/kg wet | *3.750* | | *104* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.78* | | mg/kg wet | *2.500* | | *111* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.44 | 0.025 | mg/kg wet | 2.500 | | 97 | 40-140 | 0.2 | 30 | |
| 1,2,4-Trichlorobenzene | 2.19 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 0.7 | 30 | |
| 1,2-Dichlorobenzene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 0.5 | 30 | |
| 1,3-Dichlorobenzene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 0.7 | 30 | |
| 1,4-Dichlorobenzene | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 0.1 | 30 | |
| 2,4,5-Trichlorophenol | 2.60 | 0.250 | mg/kg wet | 2.500 | | 104 | 30-130 | 0.1 | 30 | |
| 2,4,6-Trichlorophenol | 2.55 | 0.250 | mg/kg wet | 2.500 | | 102 | 30-130 | 0.6 | 30 | |
| 2,4-Dichlorophenol | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 30-130 | 0.3 | 30 | |
| 2,4-Dimethylphenol | 3.82 | 0.250 | mg/kg wet | 2.500 | | 153 | 30-130 | 0.2 | 30 | B+ |
| 2,4-Dinitrophenol | 1.89 | 1.00 | mg/kg wet | 2.500 | | 76 | 15-140 | 1 | 30 | |
| 2,4-Dinitrotoluene | 2.86 | 0.250 | mg/kg wet | 2.500 | | 114 | 40-140 | 1 | 30 | |
| 2,6-Dinitrotoluene | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 2 | 30 | |
| 2-Chloronaphthalene | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | 0.3 | 30 | |
| 2-Chlorophenol | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 30-130 | 2 | 30 | |
| 2-Methylnaphthalene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 0.7 | 30 | |
| 2-Methylphenol | 2.61 | 0.250 | mg/kg wet | 2.500 | | 104 | 15-140 | 0.3 | 30 | |
| 2-Nitrophenol | 2.16 | 0.500 | mg/kg wet | 2.500 | | 86 | 30-130 | 0.9 | 30 | |
| 3,3´-Dichlorobenzidine | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 4 | 30 | |
| 3+4-Methylphenol | 5.25 | 0.250 | mg/kg wet | 5.000 | | 105 | 15-140 | 0.7 | 30 | |
| 4-Bromophenyl-phenylether | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 1 | 30 | |
| 4-Chloroaniline | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 15-140 | 3 | 30 | |
| 4-Nitrophenol | 2.39 | 1.00 | mg/kg wet | 2.500 | | 95 | 15-140 | 2 | 30 | |
| Acenaphthene | 2.57 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 0.1 | 30 | |
| Acenaphthylene | 2.66 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 2 | 30 | |
| Acetophenone | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 1 | 30 | |
| Aniline | 2.64 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 4 | 30 | |
| Anthracene | 2.76 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | 0.4 | 30 | |
| Azobenzene | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 0.3 | 30 | |
| Benzo(a)anthracene | 2.78 | 0.250 | mg/kg wet | 2.500 | | 111 | 40-140 | 1 | 30 | |
| Benzo(a)pyrene | 2.87 | 0.250 | mg/kg wet | 2.500 | | 115 | 40-140 | 1 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DD43017 - 3546** | | | | | | | | | | |
| Benzo(b)fluoranthene | 2.82 | 0.250 | mg/kg wet | 2.500 | | 113 | 40-140 | 2 | 30 | |
| Benzo(g,h,i)perylene | 2.57 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 2 | 30 | |
| Benzo(k)fluoranthene | 2.61 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 0.9 | 30 | |
| bis(2-Chloroethoxy)methane | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 0.2 | 30 | |
| bis(2-Chloroethyl)ether | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 2 | 30 | |
| bis(2-chloroisopropyl)Ether | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 1 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.54 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 2 | 30 | |
| Butylbenzylphthalate | 2.66 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 2 | 30 | |
| Chrysene | 2.66 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 0.8 | 30 | |
| Dibenzo(a,h)Anthracene | 2.55 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 0.7 | 30 | |
| Dibenzofuran | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 0.5 | 30 | |
| Diethylphthalate | 2.69 | 0.250 | mg/kg wet | 2.500 | | 108 | 40-140 | 0.2 | 30 | |
| Dimethylphthalate | 2.65 | 0.250 | mg/kg wet | 2.500 | | 106 | 15-140 | 0.5 | 30 | |
| Di-n-butylphthalate | 2.75 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | 0.4 | 30 | |
| Di-n-octylphthalate | 3.00 | 0.500 | mg/kg wet | 2.500 | | 120 | 40-140 | 4 | 30 | |
| Fluoranthene | 2.83 | 0.250 | mg/kg wet | 2.500 | | 113 | 40-140 | 0.7 | 30 | |
| Fluorene | 2.66 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 0.4 | 30 | |
| Hexachlorobenzene | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 2 | 30 | |
| Hexachlorobutadiene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 0.002 | 30 | |
| Hexachloroethane | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 0.2 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 1 | 30 | |
| Isophorone | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 0.9 | 30 | |
| Naphthalene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 0.7 | 30 | |
| Nitrobenzene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | 1 | 30 | |
| N-Nitrosodimethylamine | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 0.8 | 30 | |
| Pentachlorophenol | 2.36 | 1.00 | mg/kg wet | 2.500 | | 94 | 15-140 | 0.3 | 30 | |
| Phenanthrene | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | 0.6 | 30 | |
| Phenol | 2.57 | 0.250 | mg/kg wet | 2.500 | | 103 | 15-140 | 2 | 30 | |
| Pyrene | 2.81 | 0.250 | mg/kg wet | 2.500 | | 112 | 40-140 | 2 | 30 | |
| Pyridine | 2.58 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 1 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.40* | | mg/kg wet | *2.500* | | *96* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.00* | | mg/kg wet | *3.750* | | *107* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.82* | | mg/kg wet | *3.750* | | *102* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.49* | | mg/kg wet | *2.500* | | *100* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.85* | | mg/kg wet | *3.750* | | *103* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.26* | | mg/kg wet | *2.500* | | *91* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.76* | | mg/kg wet | *3.750* | | *100* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.75* | | mg/kg wet | *2.500* | | *110* | *30-130* | | | |
| **Batch DE40104 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40104 - 3546** | | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40104 - 3546** | | | | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyridine | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.14* | | mg/kg wet | *2.500* | | *86* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.60* | | mg/kg wet | *3.750* | | *123* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.05* | | mg/kg wet | *3.750* | | *81* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.31* | | mg/kg wet | *2.500* | | *93* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.06* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.07* | | mg/kg wet | *2.500* | | *83* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *2.99* | | mg/kg wet | *3.750* | | *80* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.89* | | mg/kg wet | *2.500* | | *116* | *30-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.12 | 0.025 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| 1,2-Dichlorobenzene | 1.99 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| 1,3-Dichlorobenzene | 2.06 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| 1,4-Dichlorobenzene | 1.97 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 30-130 | | | |
| 2,4-Dichlorophenol | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 30-130 | | | |
| 2,4-Dimethylphenol | 3.26 | 0.250 | mg/kg wet | 2.500 | | 130 | 30-130 | | | B+ |
| 2,4-Dinitrophenol | 2.28 | 1.00 | mg/kg wet | 2.500 | | 91 | 15-140 | | | |
| 2,4-Dinitrotoluene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| 2-Chloronaphthalene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| 2-Chlorophenol | 1.94 | 0.250 | mg/kg wet | 2.500 | | 78 | 30-130 | | | |
| 2-Methylnaphthalene | 1.98 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| 2-Methylphenol | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 15-140 | | | |
| 2-Nitrophenol | 2.14 | 0.500 | mg/kg wet | 2.500 | | 86 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.65 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| 3+4-Methylphenol | 4.14 | 0.250 | mg/kg wet | 5.000 | | 83 | 15-140 | | | |
| 4-Bromophenyl-phenylether | 2.85 | 0.250 | mg/kg wet | 2.500 | | 114 | 40-140 | | | |
| 4-Chloroaniline | 2.03 | 0.250 | mg/kg wet | 2.500 | | 81 | 15-140 | | | |
| 4-Nitrophenol | 2.23 | 1.00 | mg/kg wet | 2.500 | | 89 | 15-140 | | | |
| Acenaphthene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Acenaphthylene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Acetophenone | 1.91 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40104 - 3546** | | | | | | | | | | |
| Aniline | 1.91 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Anthracene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Azobenzene | 1.87 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| Benzo(a)anthracene | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Benzo(a)pyrene | 2.65 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.69 | 0.250 | mg/kg wet | 2.500 | | 108 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 1.68 | 0.250 | mg/kg wet | 2.500 | | 67 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 1.69 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.76 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Butylbenzylphthalate | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Chrysene | 2.55 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.77 | 0.250 | mg/kg wet | 2.500 | | 111 | 40-140 | | | |
| Dibenzofuran | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Diethylphthalate | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Dimethylphthalate | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 15-140 | | | |
| Di-n-butylphthalate | 2.55 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| Di-n-octylphthalate | 2.35 | 0.500 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Fluoranthene | 2.60 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Fluorene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Hexachlorobenzene | 3.02 | 0.250 | mg/kg wet | 2.500 | | 121 | 40-140 | | | |
| Hexachlorobutadiene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Hexachloroethane | 2.01 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | | | |
| Isophorone | 1.71 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | | | |
| Naphthalene | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 40-140 | | | |
| Nitrobenzene | 1.80 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | | | |
| N-Nitrosodimethylamine | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Pentachlorophenol | 2.45 | 1.00 | mg/kg wet | 2.500 | | 98 | 15-140 | | | |
| Phenanthrene | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| Phenol | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 15-140 | | | |
| Pyrene | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Pyridine | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.17* | | mg/kg wet | *2.500* | | *87* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.73* | | mg/kg wet | *3.750* | | *126* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.15* | | mg/kg wet | *3.750* | | *84* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.39* | | mg/kg wet | *2.500* | | *95* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.06* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.88* | | mg/kg wet | *2.500* | | *75* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.01* | | mg/kg wet | *3.750* | | *80* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.88* | | mg/kg wet | *2.500* | | *115* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.10 | 0.025 | mg/kg wet | 2.500 | | 84 | 40-140 | 0.7 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40104 - 3546** | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 2.03 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | 2 | 30 | |
| 1,2-Dichlorobenzene | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | 2 | 30 | |
| 1,3-Dichlorobenzene | 2.03 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | 1 | 30 | |
| 1,4-Dichlorobenzene | 2.01 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 2 | 30 | |
| 2,4,5-Trichlorophenol | 2.60 | 0.250 | mg/kg wet | 2.500 | | 104 | 30-130 | 3 | 30 | |
| 2,4,6-Trichlorophenol | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 30-130 | 1 | 30 | |
| 2,4-Dichlorophenol | 2.02 | 0.250 | mg/kg wet | 2.500 | | 81 | 30-130 | 2 | 30 | |
| 2,4-Dimethylphenol | 3.30 | 0.250 | mg/kg wet | 2.500 | | 132 | 30-130 | 1 | 30 | B+ |
| 2,4-Dinitrophenol | 2.30 | 1.00 | mg/kg wet | 2.500 | | 92 | 15-140 | 0.9 | 30 | |
| 2,4-Dinitrotoluene | 2.59 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 2 | 30 | |
| 2,6-Dinitrotoluene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 3 | 30 | |
| 2-Chloronaphthalene | 2.14 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 3 | 30 | |
| 2-Chlorophenol | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 30-130 | 0.1 | 30 | |
| 2-Methylnaphthalene | 1.99 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | 0.4 | 30 | |
| 2-Methylphenol | 1.99 | 0.250 | mg/kg wet | 2.500 | | 80 | 15-140 | 4 | 30 | |
| 2-Nitrophenol | 2.09 | 0.500 | mg/kg wet | 2.500 | | 84 | 30-130 | 2 | 30 | |
| 3,3´-Dichlorobenzidine | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | 2 | 30 | |
| 3+4-Methylphenol | 4.04 | 0.250 | mg/kg wet | 5.000 | | 81 | 15-140 | 3 | 30 | |
| 4-Bromophenyl-phenylether | 2.87 | 0.250 | mg/kg wet | 2.500 | | 115 | 40-140 | 0.6 | 30 | |
| 4-Chloroaniline | 1.94 | 0.250 | mg/kg wet | 2.500 | | 78 | 15-140 | 4 | 30 | |
| 4-Nitrophenol | 2.04 | 1.00 | mg/kg wet | 2.500 | | 81 | 15-140 | 9 | 30 | |
| Acenaphthene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 2 | 30 | |
| Acenaphthylene | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 0.9 | 30 | |
| Acetophenone | 1.89 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | 1 | 30 | |
| Aniline | 1.89 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | 1 | 30 | |
| Anthracene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 1 | 30 | |
| Azobenzene | 1.87 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | 0.1 | 30 | |
| Benzo(a)anthracene | 2.50 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 1 | 30 | |
| Benzo(a)pyrene | 2.64 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 0.3 | 30 | |
| Benzo(b)fluoranthene | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 1 | 30 | |
| Benzo(g,h,i)perylene | 2.66 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 1 | 30 | |
| Benzo(k)fluoranthene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 2 | 30 | |
| bis(2-Chloroethoxy)methane | 1.69 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | 0.7 | 30 | |
| bis(2-Chloroethyl)ether | 1.71 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | 1 | 30 | |
| bis(2-chloroisopropyl)Ether | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | 1 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.57 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 2 | 30 | |
| Butylbenzylphthalate | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 2 | 30 | |
| Chrysene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 2 | 30 | |
| Dibenzo(a,h)Anthracene | 2.76 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | 0.7 | 30 | |
| Dibenzofuran | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 2 | 30 | |
| Diethylphthalate | 2.44 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 2 | 30 | |
| Dimethylphthalate | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 15-140 | 3 | 30 | |
| Di-n-butylphthalate | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 2 | 30 | |
| Di-n-octylphthalate | 2.39 | 0.500 | mg/kg wet | 2.500 | | 96 | 40-140 | 1 | 30 | |
| Fluoranthene | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 3 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40104 - 3546** | | | | | | | | | | |
| Fluorene | 2.36 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 1 | 30 | |
| Hexachlorobenzene | 2.91 | 0.250 | mg/kg wet | 2.500 | | 117 | 40-140 | 4 | 30 | |
| Hexachlorobutadiene | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 1 | 30 | |
| Hexachloroethane | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | 3 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.66 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 1 | 30 | |
| Isophorone | 1.74 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | 2 | 30 | |
| Naphthalene | 1.85 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | 0.6 | 30 | |
| Nitrobenzene | 1.84 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | 2 | 30 | |
| N-Nitrosodimethylamine | 1.82 | 0.250 | mg/kg wet | 2.500 | | 73 | 40-140 | 2 | 30 | |
| Pentachlorophenol | 2.41 | 1.00 | mg/kg wet | 2.500 | | 97 | 15-140 | 1 | 30 | |
| Phenanthrene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 0.8 | 30 | |
| Phenol | 1.85 | 0.250 | mg/kg wet | 2.500 | | 74 | 15-140 | 4 | 30 | |
| Pyrene | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 1 | 30 | |
| Pyridine | 1.77 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | 0.7 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.10* | | mg/kg wet | *2.500* | | *84* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.57* | | mg/kg wet | *3.750* | | *122* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.01* | | mg/kg wet | *3.750* | | *80* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.33* | | mg/kg wet | *2.500* | | *93* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.96* | | mg/kg wet | *3.750* | | *79* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.89* | | mg/kg wet | *2.500* | | *76* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *2.83* | | mg/kg wet | *3.750* | | *76* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.80* | | mg/kg wet | *2.500* | | *112* | *30-130* | | | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DD43003 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0215* | | mg/kg wet | *0.02500* | | *86* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DD43003 - 3540C** | | | | | | | | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0214* | | mg/kg wet | *0.02500* | | *86* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0221* | | mg/kg wet | *0.02500* | | *88* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 92 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 99 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 99 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0220* | | mg/kg wet | *0.02500* | | *88* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0219* | | mg/kg wet | *0.02500* | | *87* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0222* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0219* | | mg/kg wet | *0.02500* | | *88* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | 0.8 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 91 | 40-140 | 0.9 | 30 | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 98 | 40-140 | 2 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 97 | 40-140 | 2 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0209* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0206* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0216* | | mg/kg wet | *0.02500* | | *86* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0213* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DD43037 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 4,4´-DDD | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDD [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Chlordane (Total) | ND | 0.0200 | mg/kg wet | | | | | | | |
| Chlordane (Total) [2C] | ND | 0.0200 | mg/kg wet | | | | | | | |
| delta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| delta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DD43037 - 3546** | | | | | | | | | | |
| Endosulfan I | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) [2C] | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Toxaphene | ND | 0.125 | mg/kg wet | | | | | | | |
| Toxaphene [2C] | ND | 0.125 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0152* | | mg/kg wet | *0.01250* | | *122* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0153* | | mg/kg wet | *0.01250* | | *122* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0125* | | mg/kg wet | *0.01250* | | *100* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0126* | | mg/kg wet | *0.01250* | | *101* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 4,4´-DDD | 0.0163 | 0.0025 | mg/kg wet | 0.01250 | | 131 | 40-140 | | | |
| 4,4´-DDD [2C] | 0.0167 | 0.0025 | mg/kg wet | 0.01250 | | 133 | 40-140 | | | |
| 4,4´-DDE | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | | | |
| 4,4´-DDE [2C] | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | | | |
| 4,4´-DDT | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | | | |
| 4,4´-DDT [2C] | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | | | |
| Aldrin | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | | | |
| Aldrin [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| alpha-BHC | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | | | |
| alpha-BHC [2C] | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | | | |
| alpha-Chlordane | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| alpha-Chlordane [2C] | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | | | |
| beta-BHC | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| beta-BHC [2C] | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| delta-BHC | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| delta-BHC [2C] | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DD43037 - 3546** | | | | | | | | | | |
| Dieldrin | 0.0154 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | | | |
| Dieldrin [2C] | 0.0157 | 0.0025 | mg/kg wet | 0.01250 | | 125 | 40-140 | | | |
| Endosulfan I | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | | | |
| Endosulfan I [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| Endosulfan II | 0.0151 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | | | |
| Endosulfan II [2C] | 0.0154 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | | | |
| Endosulfan Sulfate | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | | | |
| Endosulfan Sulfate [2C] | 0.0154 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | | | |
| Endrin | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | | | |
| Endrin [2C] | 0.0151 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | | | |
| Endrin Ketone | 0.0163 | 0.0025 | mg/kg wet | 0.01250 | | 130 | 40-140 | | | |
| Endrin Ketone [2C] | 0.0163 | 0.0025 | mg/kg wet | 0.01250 | | 131 | 40-140 | | | |
| gamma-BHC (Lindane) | 0.0142 | 0.0015 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| gamma-BHC (Lindane) [2C] | 0.0141 | 0.0015 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| gamma-Chlordane | 0.0159 | 0.0025 | mg/kg wet | 0.01250 | | 127 | 40-140 | | | |
| gamma-Chlordane [2C] | 0.0160 | 0.0025 | mg/kg wet | 0.01250 | | 128 | 40-140 | | | |
| Heptachlor | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| Heptachlor [2C] | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| Heptachlor Epoxide | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | | | |
| Heptachlor Epoxide [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| Hexachlorobenzene | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | | | |
| Hexachlorobenzene [2C] | 0.0124 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | | | |
| Methoxychlor | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | | | |
| Methoxychlor [2C] | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0154* | | mg/kg wet | *0.01250* | | *123* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0154* | | mg/kg wet | *0.01250* | | *124* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0132* | | mg/kg wet | *0.01250* | | *105* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0133* | | mg/kg wet | *0.01250* | | *106* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 4,4´-DDD | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 9 | 30 | |
| 4,4´-DDD [2C] | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | 9 | 30 | |
| 4,4´-DDE | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 10 | 30 | |
| 4,4´-DDE [2C] | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 9 | 30 | |
| 4,4´-DDT | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 6 | 30 | |
| 4,4´-DDT [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 6 | 30 | |
| Aldrin | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 8 | 30 | |
| Aldrin [2C] | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 9 | 30 | |
| alpha-BHC | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 9 | 30 | |
| alpha-BHC [2C] | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 9 | 30 | |
| alpha-Chlordane | 0.0124 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | 9 | 30 | |
| alpha-Chlordane [2C] | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | 9 | 30 | |
| beta-BHC | 0.0122 | 0.0025 | mg/kg wet | 0.01250 | | 98 | 40-140 | 8 | 30 | |
| beta-BHC [2C] | 0.0121 | 0.0025 | mg/kg wet | 0.01250 | | 97 | 40-140 | 8 | 30 | |
| delta-BHC | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | 9 | 30 | |
| delta-BHC [2C] | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | 9 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DD43037 - 3546** | | | | | | | | | | |
| Dieldrin | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 9 | 30 | |
| Dieldrin [2C] | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 9 | 30 | |
| Endosulfan I | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 8 | 30 | |
| Endosulfan I [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 9 | 30 | |
| Endosulfan II | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 9 | 30 | |
| Endosulfan II [2C] | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 9 | 30 | |
| Endosulfan Sulfate | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 7 | 30 | |
| Endosulfan Sulfate [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 8 | 30 | |
| Endrin | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 9 | 30 | |
| Endrin [2C] | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 9 | 30 | |
| Endrin Ketone | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | 7 | 30 | |
| Endrin Ketone [2C] | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | 7 | 30 | |
| gamma-BHC (Lindane) | 0.0130 | 0.0015 | mg/kg wet | 0.01250 | | 104 | 40-140 | 9 | 30 | |
| gamma-BHC (Lindane) [2C] | 0.0130 | 0.0015 | mg/kg wet | 0.01250 | | 104 | 40-140 | 8 | 30 | |
| gamma-Chlordane | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 9 | 30 | |
| gamma-Chlordane [2C] | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | 9 | 30 | |
| Heptachlor | 0.0124 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | 8 | 30 | |
| Heptachlor [2C] | 0.0124 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | 8 | 30 | |
| Heptachlor Epoxide | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 9 | 30 | |
| Heptachlor Epoxide [2C] | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 8 | 30 | |
| Hexachlorobenzene | 0.0118 | 0.0025 | mg/kg wet | 0.01250 | | 95 | 40-140 | 7 | 30 | |
| Hexachlorobenzene [2C] | 0.0119 | 0.0025 | mg/kg wet | 0.01250 | | 96 | 40-140 | 4 | 30 | |
| Methoxychlor | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 5 | 30 | |
| Methoxychlor [2C] | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 6 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0142* | | mg/kg wet | *0.01250* | | *113* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0142* | | mg/kg wet | *0.01250* | | *114* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0121* | | mg/kg wet | *0.01250* | | *97* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0123* | | mg/kg wet | *0.01250* | | *98* | *30-150* | | | |
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DE40248 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 2,4,5-T | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-T [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4-D | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-D [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-DB | ND | 0.048 | mg/kg wet | | | | | | | |
| 2,4-DB [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| Dalapon | ND | 0.046 | mg/kg wet | | | | | | | |
| Dalapon [2C] | ND | 0.046 | mg/kg wet | | | | | | | |
| Dicamba | ND | 0.009 | mg/kg wet | | | | | | | |
| Dicamba [2C] | ND | 0.009 | mg/kg wet | | | | | | | |
| Dichlorprop | ND | 0.047 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DE40248 - 3546** | | | | | | | | | | |
| Dichlorprop [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| Dinoseb | ND | 0.048 | mg/kg wet | | | | | | | |
| Dinoseb [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| MCPA | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPA [2C] | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPP | ND | 2.35 | mg/kg wet | | | | | | | |
| MCPP [2C] | ND | 2.35 | mg/kg wet | | | | | | | |
| *Surrogate: DCAA* | *0.170* | | mg/kg wet | *0.2000* | | *85* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.154* | | mg/kg wet | *0.2000* | | *77* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 2,4,5-T | 0.011 | 0.010 | mg/kg wet | 0.01900 | | 56 | 40-140 | | | |
| 2,4,5-T [2C] | 0.010 | 0.010 | mg/kg wet | 0.01900 | | 54 | 40-140 | | | |
| 2,4,5-TP (Silvex) | 0.011 | 0.010 | mg/kg wet | 0.01900 | | 58 | 40-140 | | | |
| 2,4,5-TP (Silvex) [2C] | 0.011 | 0.010 | mg/kg wet | 0.01900 | | 60 | 40-140 | | | |
| 2,4-D | 0.112 | 0.047 | mg/kg wet | 0.1880 | | 60 | 40-140 | | | |
| 2,4-D [2C] | 0.101 | 0.047 | mg/kg wet | 0.1880 | | 54 | 40-140 | | | |
| 2,4-DB | 0.118 | 0.048 | mg/kg wet | 0.1900 | | 62 | 40-140 | | | |
| 2,4-DB [2C] | 0.120 | 0.048 | mg/kg wet | 0.1900 | | 63 | 40-140 | | | |
| Dalapon | 0.273 | 0.046 | mg/kg wet | 0.4550 | | 60 | 40-140 | | | |
| Dalapon [2C] | 0.280 | 0.046 | mg/kg wet | 0.4550 | | 62 | 40-140 | | | |
| Dicamba | 0.011 | 0.009 | mg/kg wet | 0.01880 | | 56 | 40-140 | | | |
| Dicamba [2C] | 0.012 | 0.009 | mg/kg wet | 0.01880 | | 64 | 40-140 | | | |
| Dichlorprop | 0.138 | 0.047 | mg/kg wet | 0.1880 | | 74 | 40-140 | | | |
| Dichlorprop [2C] | 0.122 | 0.047 | mg/kg wet | 0.1880 | | 65 | 40-140 | | | |
| Dinoseb | 0.015 | 0.048 | mg/kg wet | 0.09500 | | 16 | 10-100 | | | |
| Dinoseb [2C] | 0.016 | 0.048 | mg/kg wet | 0.09500 | | 17 | 10-100 | | | |
| MCPA | 12.4 | 2.32 | mg/kg wet | 18.60 | | 67 | 40-140 | | | |
| MCPA [2C] | 13.0 | 2.32 | mg/kg wet | 18.60 | | 70 | 40-140 | | | |
| MCPP | 12.2 | 2.35 | mg/kg wet | 18.80 | | 65 | 40-140 | | | |
| MCPP [2C] | 12.5 | 2.35 | mg/kg wet | 18.80 | | 66 | 40-140 | | | |
| *Surrogate: DCAA* | *0.144* | | mg/kg wet | *0.2000* | | *72* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.128* | | mg/kg wet | *0.2000* | | *64* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 2,4,5-T | 0.013 | 0.010 | mg/kg wet | 0.01900 | | 70 | 40-140 | 22 | 30 | |
| 2,4,5-T [2C] | 0.013 | 0.010 | mg/kg wet | 0.01900 | | 70 | 40-140 | 26 | 30 | |
| 2,4,5-TP (Silvex) | 0.014 | 0.010 | mg/kg wet | 0.01900 | | 72 | 40-140 | 22 | 30 | |
| 2,4,5-TP (Silvex) [2C] | 0.014 | 0.010 | mg/kg wet | 0.01900 | | 76 | 40-140 | 24 | 30 | |
| 2,4-D | 0.135 | 0.047 | mg/kg wet | 0.1880 | | 72 | 40-140 | 18 | 30 | |
| 2,4-D [2C] | 0.124 | 0.047 | mg/kg wet | 0.1880 | | 66 | 40-140 | 20 | 30 | |
| 2,4-DB | 0.144 | 0.048 | mg/kg wet | 0.1900 | | 76 | 40-140 | 19 | 30 | |
| 2,4-DB [2C] | 0.153 | 0.048 | mg/kg wet | 0.1900 | | 80 | 40-140 | 24 | 30 | |
| Dalapon | 0.335 | 0.046 | mg/kg wet | 0.4550 | | 74 | 40-140 | 20 | 30 | |
| Dalapon [2C] | 0.356 | 0.046 | mg/kg wet | 0.4550 | | 78 | 40-140 | 24 | 30 | |
| Dicamba | 0.012 | 0.009 | mg/kg wet | 0.01880 | | 66 | 40-140 | 16 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DE40248 - 3546** | | | | | | | | | | |
| Dicamba [2C] | 0.015 | 0.009 | mg/kg wet | 0.01880 | | 78 | 40-140 | 20 | 30 | |
| Dichlorprop | 0.162 | 0.047 | mg/kg wet | 0.1880 | | 86 | 40-140 | 16 | 30 | |
| Dichlorprop [2C] | 0.148 | 0.047 | mg/kg wet | 0.1880 | | 79 | 40-140 | 19 | 30 | |
| Dinoseb | 0.020 | 0.048 | mg/kg wet | 0.09500 | | 21 | 10-100 | 26 | 30 | |
| Dinoseb [2C] | 0.021 | 0.048 | mg/kg wet | 0.09500 | | 22 | 10-100 | 27 | 30 | |
| MCPA | 15.2 | 2.32 | mg/kg wet | 18.60 | | 82 | 40-140 | 20 | 30 | |
| MCPA [2C] | 16.0 | 2.32 | mg/kg wet | 18.60 | | 86 | 40-140 | 21 | 30 | |
| MCPP | 14.9 | 2.35 | mg/kg wet | 18.80 | | 79 | 40-140 | 19 | 30 | |
| MCPP [2C] | 15.7 | 2.35 | mg/kg wet | 18.80 | | 84 | 40-140 | 23 | 30 | |
| *Surrogate: DCAA* | *0.171* | | mg/kg wet | *0.2000* | | *85* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.147* | | mg/kg wet | *0.2000* | | *73* | *30-150* | | | |
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DD43005 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *3.62* | | mg/kg wet | *5.000* | | *72* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.5 | 0.2 | mg/kg wet | 2.500 | | 60 | 40-140 | | | |
| Docosane (C22) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Dodecane (C12) | 1.7 | 0.2 | mg/kg wet | 2.500 | | 68 | 40-140 | | | |
| Eicosane (C20) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| Hexacosane (C26) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Hexadecane (C16) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Nonadecane (C19) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| Nonane (C9) | 1.3 | 0.2 | mg/kg wet | 2.500 | | 53 | 30-140 | | | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Octadecane (C18) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| Tetracosane (C24) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| Tetradecane (C14) | 1.7 | 0.2 | mg/kg wet | 2.500 | | 68 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DD43005 - 3546** | | | | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 27.2 | 10.0 | mg/kg wet | 35.00 | | 78 | 40-140 | | | |
| Triacontane (C30) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *3.49* | | mg/kg wet | *5.000* | | *70* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.7 | 0.2 | mg/kg wet | 2.500 | | 66 | 40-140 | 9 | 25 | |
| Docosane (C22) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 2 | 25 | |
| Dodecane (C12) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | 7 | 25 | |
| Eicosane (C20) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | 2 | 25 | |
| Hexacosane (C26) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | 3 | 25 | |
| Hexadecane (C16) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | 4 | 25 | |
| Hexatriacontane (C36) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 92 | 40-140 | 2 | 25 | |
| Nonadecane (C19) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | 1 | 25 | |
| Nonane (C9) | 1.4 | 0.2 | mg/kg wet | 2.500 | | 57 | 30-140 | 8 | 25 | |
| Octacosane (C28) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 3 | 25 | |
| Octadecane (C18) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | 0.8 | 25 | |
| Tetracosane (C24) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | 2 | 25 | |
| Tetradecane (C14) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | 7 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 27.3 | 10.0 | mg/kg wet | 35.00 | | 78 | 40-140 | 0.2 | 25 | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 4 | 25 | |
| *Surrogate: O-Terphenyl* | *3.45* | | mg/kg wet | *5.000* | | *69* | *40-140* | | | |
| **Batch DE40105 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *4.28* | | mg/kg wet | *5.000* | | *86* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.7 | 0.2 | mg/kg wet | 2.500 | | 69 | 40-140 | | | |
| Docosane (C22) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Dodecane (C12) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | | | |
| Eicosane (C20) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Hexacosane (C26) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40105 - 3546** | | | | | | | | | | |
| Hexadecane (C16) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Hexatriacontane (C36) | 2.9 | 0.2 | mg/kg wet | 2.500 | | 117 | 40-140 | | | |
| Nonadecane (C19) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Nonane (C9) | 1.5 | 0.2 | mg/kg wet | 2.500 | | 60 | 30-140 | | | |
| Octacosane (C28) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| Octadecane (C18) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Tetracosane (C24) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Tetradecane (C14) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 30.9 | 10.0 | mg/kg wet | 35.00 | | 88 | 40-140 | | | |
| Triacontane (C30) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *3.90* | | mg/kg wet | *5.000* | | *78* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.7 | 0.2 | mg/kg wet | 2.500 | | 69 | 40-140 | 0.8 | 25 | |
| Docosane (C22) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 93 | 40-140 | 3 | 25 | |
| Dodecane (C12) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | 3 | 25 | |
| Eicosane (C20) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 91 | 40-140 | 3 | 25 | |
| Hexacosane (C26) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 96 | 40-140 | 2 | 25 | |
| Hexadecane (C16) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | 1 | 25 | |
| Hexatriacontane (C36) | 3.0 | 0.2 | mg/kg wet | 2.500 | | 119 | 40-140 | 1 | 25 | |
| Nonadecane (C19) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 90 | 40-140 | 3 | 25 | |
| Nonane (C9) | 1.5 | 0.2 | mg/kg wet | 2.500 | | 60 | 30-140 | 0.3 | 25 | |
| Octacosane (C28) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 95 | 40-140 | 2 | 25 | |
| Octadecane (C18) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | 3 | 25 | |
| Tetracosane (C24) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 89 | 40-140 | 2 | 25 | |
| Tetradecane (C14) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | 3 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 31.8 | 10.0 | mg/kg wet | 35.00 | | 91 | 40-140 | 3 | 25 | |
| Triacontane (C30) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 97 | 40-140 | 2 | 25 | |
| *Surrogate: O-Terphenyl* | *3.91* | | mg/kg wet | *5.000* | | *78* | *40-140* | | | |
| **Classical Chemistry** | | | | | | | | | | |
| **Batch DD43048 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Reactive Cyanide | ND | 2.0 | mg/kg | | | | | | | |
| Reactive Sulfide | ND | 2.0 | mg/kg | | | | | | | |
| **LCS** | | | | | | | | | | |
| Reactive Cyanide | 4.1 | 2.0 | mg/kg | 100.3 | | 4 | 0.68-5.41 | | | |
| Reactive Sulfide | 2.0 | 2.0 | mg/kg | 10.00 | | 20 | 0-44 | | | |
| **Batch DE40128 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Conductivity | ND | 5 | umhos/cm | | | | | | | |
| **LCS** | | | | | | | | | | |
| Conductivity | 1380 | | umhos/cm | 1410 | | 98 | 90-110 | | | |
| **Batch DE40144 - General Preparation** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Classical Chemistry** | | | | | | | | | | |
| **Batch DE40144 - General Preparation** | | | | | | | | | | |
| **Reference** | | | | | | | | | | |
| Flashpoint | 81 | | °F | 81.00 | | 100 | 97.9-102.1 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

**Notes and Definitions**

| | |
|---|---|
| Z18 | Temperature is not within 23 +/-2 ºC. |
| WL | Results obtained from a deionized water leach of the sample. |
| U | Analyte included in the analysis, but not detected |
| S+ | Surrogate recovery(ies) above upper control limit (S+). |
| RRF | Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration |
| Q | Calibration required quadratic regression (Q). |
| P | Percent difference between primary and confirmation results exceeds 40% (P). |
| LC | Lower value is used due to matrix interferences (LC). |
| ICV+ | Initial Calibration Verification recovery is above upper control limit (ICV+). |
| D+ | Relative percent difference for duplicate is outside of criteria (D+). |
| D | Diluted. |
| CD+ | Continuing Calibration %Diff/Drift is above control limit (CD+). |
| CD- | Continuing Calibration %Diff/Drift is below control limit (CD-). |
| B+ | Blank Spike recovery is above upper control limit (B+). |
| > | Greater than. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1044

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24D1044
Date Received: 4/30/2024
Project Due Date: 5/7/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes/No (4/30/24)
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: 4/30/24 Time: 1749 By:

Sample Receiving Notes:

**Missing samples 7, 15--17. Received an empty labeled 4 oz. jar for sample 12.**

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 542645 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 1 | 542646 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 1 | 542681 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 1 | 542954 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 1 | 542968 | Yes | N/A | Yes | 8 oz jar | NP | |
| 1 | 542969 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 542647 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 2 | 542648 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 2 | 542682 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 2 | 542955 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 542970 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 542971 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 542649 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 3 | 542650 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 3 | 542683 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 3 | 542956 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 542972 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 542973 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 542651 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 4 | 542652 | Yes | N/A | Yes | VOA Vial | DI Water | |

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24D1044
Date Received: 4/30/2024

| | | | | | | |
|---|---|---|---|---|---|---|
| 14 | 542993 | Yes | N/A | Yes | 8 oz jar | NP |
| 18 | 542679 | Yes | N/A | Yes | VOA Vial | DI Water |
| 18 | 542680 | Yes | N/A | Yes | VOA Vial | DI Water |
| 18 | 542698 | Yes | N/A | Yes | VOA Vial | MeOH |
| 18 | 542967 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 18 | 542994 | Yes | N/A | Yes | 8 oz jar | NP |
| 18 | 542995 | Yes | N/A | Yes | 8 oz jar | NP |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials TD

Are barcode labels on correct containers? (Yes) / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: [signature] Date & Time: TD 4/30/24 4/30/24 1608

Reviewed By: [signature] Date & Time: 4/30/24 1749

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24D1044

Date Received: 4/30/2024

| | | | | | | |
|---|---|---|---|---|---|---|
| 4 | 542684 | Yes | N/A | Yes | VOA Vial | MeOH |
| 4 | 542957 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 4 | 542974 | Yes | N/A | Yes | 8 oz jar | NP |
| 4 | 542975 | Yes | N/A | Yes | 8 oz jar | NP |
| 5 | 542653 | Yes | N/A | Yes | VOA Vial | DI Water |
| 5 | 542654 | Yes | N/A | Yes | VOA Vial | DI Water |
| 5 | 542685 | Yes | N/A | Yes | VOA Vial | MeOH |
| 5 | 542958 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 5 | 542976 | Yes | N/A | Yes | 8 oz jar | NP |
| 5 | 542977 | Yes | N/A | Yes | 8 oz jar | NP |
| 6 | 542655 | Yes | N/A | Yes | VOA Vial | DI Water |
| 6 | 542656 | Yes | N/A | Yes | VOA Vial | DI Water |
| 6 | 542686 | Yes | N/A | Yes | VOA Vial | MeOH |
| 6 | 542959 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 6 | 542978 | Yes | N/A | Yes | 8 oz jar | NP |
| 6 | 542979 | Yes | N/A | Yes | 8 oz jar | NP |
| 8 | 542659 | Yes | N/A | Yes | VOA Vial | DI Water |
| 8 | 542660 | Yes | N/A | Yes | VOA Vial | DI Water |
| 8 | 542688 | Yes | N/A | Yes | VOA Vial | MeOH |
| 8 | 542960 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 8 | 542980 | Yes | N/A | Yes | 8 oz jar | NP |
| 8 | 542981 | Yes | N/A | Yes | 8 oz jar | NP |
| 9 | 542661 | Yes | N/A | Yes | VOA Vial | DI Water |
| 9 | 542662 | Yes | N/A | Yes | VOA Vial | DI Water |
| 9 | 542689 | Yes | N/A | Yes | VOA Vial | MeOH |
| 9 | 542961 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 9 | 542982 | Yes | N/A | Yes | 8 oz jar | NP |
| 9 | 542983 | Yes | N/A | Yes | 8 oz jar | NP |
| 10 | 542663 | Yes | N/A | Yes | VOA Vial | DI Water |
| 10 | 542664 | Yes | N/A | Yes | VOA Vial | DI Water |
| 10 | 542690 | Yes | N/A | Yes | VOA Vial | MeOH |
| 10 | 542962 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 10 | 542984 | Yes | N/A | Yes | 8 oz jar | NP |
| 10 | 542985 | Yes | N/A | Yes | 8 oz jar | NP |
| 11 | 542665 | Yes | N/A | Yes | VOA Vial | DI Water |
| 11 | 542666 | Yes | N/A | Yes | VOA Vial | DI Water |
| 11 | 542691 | Yes | N/A | Yes | VOA Vial | MeOH |
| 11 | 542963 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 11 | 542986 | Yes | N/A | Yes | 8 oz jar | NP |
| 11 | 542987 | Yes | N/A | Yes | 8 oz jar | NP |
| 12 | 542667 | Yes | N/A | Yes | VOA Vial | DI Water |
| 12 | 542668 | Yes | N/A | Yes | VOA Vial | DI Water |
| 12 | 542692 | Yes | N/A | Yes | VOA Vial | MeOH |
| 12 | 542988 | Yes | N/A | Yes | 8 oz jar | NP |
| 12 | 542989 | Yes | N/A | Yes | 8 oz jar | NP |
| 13 | 542669 | Yes | N/A | Yes | VOA Vial | DI Water |
| 13 | 542670 | Yes | N/A | Yes | VOA Vial | DI Water |
| 13 | 542693 | Yes | N/A | Yes | VOA Vial | MeOH |
| 13 | 542965 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 13 | 542990 | Yes | N/A | Yes | 8 oz jar | NP |
| 13 | 542991 | Yes | N/A | Yes | 8 oz jar | NP |
| 14 | 542671 | Yes | N/A | Yes | VOA Vial | DI Water |
| 14 | 542672 | Yes | N/A | Yes | VOA Vial | DI Water |
| 14 | 542694 | Yes | N/A | Yes | VOA Vial | MeOH |
| 14 | 542966 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 14 | 542992 | Yes | N/A | Yes | 8 oz jar | NP |

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# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # ~~2401005~~ 2401044

| | | |
|---|---|---|
| **Turn Time** | 5 | Days |
| **Regulatory State** | Massachusetts | |

Reporting Limits: MA LF TDY 5/1/24

**Is this project for any of the following?:** ○ CT RCP ◉ MA MCP ○ RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | RCRA8 Metals | PCB | TPH | SVOC - incl pyr | Pest - incl Tox | Herbicides | Reactivity | Conductivity | pH | Free Liquid | Flashpoint | VOC - high | VOC - low |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4-29-24 | 0950 | Composite | Soil | JJ/II-6 | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 2 | " | 1010 | Composite | Soil | JJ/II-2 | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 3 | " | 0925 | Composite | Soil | II-8.5 | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 4 | " | 1030 | Composite | Soil | II0.5 | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 5 | " | 1135 | Composite | Soil | HH-7 | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 6 | " | 1000 | Composite | Soil | HH-5 | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 7 | 4-30-24 | 0850 | Composite | Soil | HH-3 | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 8 | 4-24-24 | 1020 | Composite | Soil | HH-1 | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 9 | " | 1125 | Composite | Soil | FF-7 | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 10 | " | 1140 | Composite | Soil | FF-5 | X | X | X | X | X | X | X | X | X | X | X | X | X |

CDB

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | AG | AG | AG | AG | AG | AG | AG | V | V |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 7 | 7 |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 10 |
| **Number of Containers per Sample:** | | | | | | | | | | 1 | | | | | 1 | 9 | 1 | 2 | |

**Laboratory Use Only**

Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C / e

**Sampled by :** DSB + KD

**Comments:** Please specify "Other" preservative and containers types in this space

Run TCLP if fails 20x

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 4-30-24 1025 | 4/30/24 10:25 | 4/30/24 15:14 | 1514 4/30/24 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # ~~24D10445~~ 24D10444

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Is this project for any of the following?: | ○ CT RCP ◉ MA MCP ○ RGP | |

Reporting Limits: MA LF

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | RCRA8 Metals | PCB | TPH | SVOC - incl pyr | Pest - incl Tox | Herbicides | Reactivity | Conductivity | pH | Free Liquid | Flashpoint | VOC - high | VOC - low | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 4-29-24 | 1150 | Composite | Soil | FF-3 | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 12 | " | 1220 | Composite | Soil | FF-1 | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 13 | " | 1115 | Composite | Soil | EE-8.5 | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 14 | " | 1500 | Composite | Soil | EE0.5 | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 15 | 4-30-24 | 1010 | Composite | Soil | DD-7 | X | X | X | X | X | X | X | X | X | X | X | X | X | CDB |
| 16 | 4-30-24 | 1000 | Composite | Soil | DD-5 | X | X | X | X | X | X | X | X | X | X | X | X | X | CDB |
| 17 | 4-30-24 | 0840 | Composite | Soil | DD-3 | X | X | X | X | X | X | X | X | X | X | X | X | X | CDB |
| 18 | 4-29-24 | 1440 | Composite | Soil | DD-1 | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| | | | Composite | Soil | BB-7 | X | X | X | X | | | | | | | | X | X | |
| | | | Composite | Soil | BB-5 | X | X | | | | | | | | | | X | X | |
| **Container Type:** | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | | | | | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | V | V | |
| **Container Volume:** | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | | | | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 7 | 7 | |
| **Preservation Code:** | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 10 | |
| | | | | | **Number of Containers per Sample:** | 1 | | | | | 1 | | | | | 9 | 1 | 2 | |

**Laboratory Use Only**

Cooler Present: 4C 5 ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C / G

**Sampled by :** PCB + KD

**Comments:** Please specify "Other" preservative and containers types in this space

Run TCLP if fails 20x

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| [signature] 4-30-24 1025 | [signature] 4/30/24 10:25 | [signature] 4/30/24 15:34 | |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24D1045**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

***REVIEWED***
***By ESS Laboratory at 5:12 pm, May 06, 2024***

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1045

## SAMPLE RECEIPT

The following samples were received on April 30, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24D1045-01 | II-0 1-2 | Soil | 8082A |
| 24D1045-02 | JJ-0 1-2 | Soil | 8082A |
| 24D1045-03 | HH-0 1-2 | Soil | 8082A |
| 24D1045-04 | GG-0 1-2 | Soil | 8082A |
| 24D1045-05 | FF-0 1-2 | Soil | 8082A |
| 24D1045-06 | EE-0 1-2 | Soil | 8082A |
| 24D1045-07 | DD-0 1-2 | Soil | 8082A |
| 24D1045-08 | CC-0 1-2 | Soil | 8082A |
| 24D1045-09 | DD-1 1-2 | Soil | 8082A |
| 24D1045-10 | CC-1 1-2 | Soil | 8082A |
| 24D1045-11 | HH-0 4-5 | Soil | 8082A |
| 24D1045-12 | FF-0 4-5 | Soil | 8082A |
| 24D1045-13 | DD-0 4-5 | Soil | 8082A |
| 24D1045-14 | DD-1 4-5 | Soil | 8082A |
| 24D1045-15 | CC-2 1-2 | Soil | 8082A |
| 24D1045-16 | CC-2 4-5 | Soil | 8082A |
| 24D1045-17 | HH-0 DUP 1-2 | Soil | 8082A |
| 24D1045-18 | FF-0 DUP 1-2 | Soil | 8082A |
| 24D1045-19 | CC-2 DUP 1-2 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1045

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**

| | |
|---|---|
| 24D1045-09 | **Lower value is used due to matrix interferences (LC).** |
| | Aroclor 1248 |
| 24D1045-09 | **Percent difference between primary and confirmation results exceeds 40% (P).** |
| | Aroclor 1248 |
| 24D1045-10 | **Lower value is used due to matrix interferences (LC).** |
| | Aroclor 1248 |
| 24D1045-10 | **Percent difference between primary and confirmation results exceeds 40% (P).** |
| | Aroclor 1248 |

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1045

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1045

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24D1045-01 through 24D1045-19**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.* | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: May 06, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-0 1-2
Date Sampled: 04/29/24 10:40
Percent Solids: 96
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1045
ESS Laboratory Sample ID: 24D1045-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 15:47 | | DD43003 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 15:47 | | DD43003 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 15:47 | | DD43003 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 15:47 | | DD43003 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 15:47 | | DD43003 |
| Aroclor 1254 [2C] | ND (0.05) | | 8082A | | 1 | 05/02/24 15:47 | | DD43003 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 15:47 | | DD43003 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 15:47 | | DD43003 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 15:47 | | DD43003 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *61 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *62 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ-0 1-2
Date Sampled: 04/29/24 10:50
Percent Solids: 96
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1045
ESS Laboratory Sample ID: 24D1045-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:07 | | DE40101 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:07 | | DE40101 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:07 | | DE40101 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:07 | | DE40101 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:07 | | DE40101 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:07 | | DE40101 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:07 | | DE40101 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:07 | | DE40101 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:07 | | DE40101 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *79 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-0 1-2
Date Sampled: 04/29/24 11:00
Percent Solids: 97
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1045
ESS Laboratory Sample ID: 24D1045-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:27 | | DE40101 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:27 | | DE40101 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:27 | | DE40101 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:27 | | DE40101 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:27 | | DE40101 |
| Aroclor 1254 [2C] | ND (0.05) | | 8082A | | 1 | 05/02/24 12:27 | | DE40101 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:27 | | DE40101 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:27 | | DE40101 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:27 | | DE40101 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: GG-0 1-2
Date Sampled: 04/29/24 12:45
Percent Solids: 93
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1045
ESS Laboratory Sample ID: 24D1045-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:47 | | DE40101 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:47 | | DE40101 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:47 | | DE40101 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:47 | | DE40101 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:47 | | DE40101 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:47 | | DE40101 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:47 | | DE40101 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:47 | | DE40101 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 12:47 | | DE40101 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *88 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *87 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-0 1-2
Date Sampled: 04/29/24 12:35
Percent Solids: 94
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1045
ESS Laboratory Sample ID: 24D1045-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:06 | | DE40101 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:06 | | DE40101 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:06 | | DE40101 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:06 | | DE40101 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:06 | | DE40101 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:06 | | DE40101 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:06 | | DE40101 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:06 | | DE40101 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:06 | | DE40101 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-0 1-2
Date Sampled: 04/29/24 13:10
Percent Solids: 93
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1045
ESS Laboratory Sample ID: 24D1045-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:26 | | DE40101 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:26 | | DE40101 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:26 | | DE40101 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:26 | | DE40101 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:26 | | DE40101 |
| **Aroclor 1254 [2C]** | **0.3** (0.05) | | 8082A | | 1 | 05/02/24 13:26 | | DE40101 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:26 | | DE40101 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:26 | | DE40101 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:26 | | DE40101 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *72 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-0 1-2
Date Sampled: 04/29/24 13:40
Percent Solids: 95
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1045
ESS Laboratory Sample ID: 24D1045-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:46 | | DE40101 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:46 | | DE40101 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:46 | | DE40101 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:46 | | DE40101 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:46 | | DE40101 |
| **Aroclor 1254 [2C]** | **0.06** (0.05) | | 8082A | | 1 | 05/02/24 13:46 | | DE40101 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:46 | | DE40101 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:46 | | DE40101 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 13:46 | | DE40101 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *70 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CC-0 1-2
Date Sampled: 04/29/24 14:00
Percent Solids: 93
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1045
ESS Laboratory Sample ID: 24D1045-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:05 | | DE40101 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:05 | | DE40101 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:05 | | DE40101 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:05 | | DE40101 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:05 | | DE40101 |
| **Aroclor 1254 [2C]** | **0.08** (0.05) | | 8082A | | 1 | 05/02/24 14:05 | | DE40101 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:05 | | DE40101 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:05 | | DE40101 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:05 | | DE40101 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-1 1-2
Date Sampled: 04/29/24 14:40
Percent Solids: 96
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1045
ESS Laboratory Sample ID: 24D1045-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:25 | | DE40101 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:25 | | DE40101 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:25 | | DE40101 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:25 | | DE40101 |
| **Aroclor 1248** | **P, LC 0.08** (0.05) | | 8082A | | 1 | 05/02/24 14:25 | | DE40101 |
| **Aroclor 1254** | **0.4** (0.05) | | 8082A | | 1 | 05/02/24 14:25 | | DE40101 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:25 | | DE40101 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:25 | | DE40101 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 14:25 | | DE40101 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CC-1 1-2
Date Sampled: 04/29/24 14:15
Percent Solids: 89
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1045
ESS Laboratory Sample ID: 24D1045-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 05/02/24 14:45 | | DE40101 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 05/02/24 14:45 | | DE40101 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 05/02/24 14:45 | | DE40101 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 05/02/24 14:45 | | DE40101 |
| **Aroclor 1248** | **P, LC 0.1** (0.06) | | 8082A | | 1 | 05/02/24 14:45 | | DE40101 |
| **Aroclor 1254** | **0.5** (0.06) | | 8082A | | 1 | 05/02/24 14:45 | | DE40101 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 05/02/24 14:45 | | DE40101 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 05/02/24 14:45 | | DE40101 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 05/02/24 14:45 | | DE40101 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-0 4-5
Date Sampled: 04/29/24 11:00
Percent Solids: 94
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1045
ESS Laboratory Sample ID: 24D1045-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 17:23 | | DE40101 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 17:23 | | DE40101 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 17:23 | | DE40101 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 17:23 | | DE40101 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 17:23 | | DE40101 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 05/02/24 17:23 | | DE40101 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 17:23 | | DE40101 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 17:23 | | DE40101 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 17:23 | | DE40101 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *77 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-0 4-5
Date Sampled: 04/29/24 12:35
Percent Solids: 93
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1045
ESS Laboratory Sample ID: 24D1045-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 17:43 | | DE40101 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 17:43 | | DE40101 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 17:43 | | DE40101 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 17:43 | | DE40101 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 17:43 | | DE40101 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 05/02/24 17:43 | | DE40101 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 17:43 | | DE40101 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 17:43 | | DE40101 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 17:43 | | DE40101 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *68 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *67 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-0 4-5
Date Sampled: 04/29/24 13:40
Percent Solids: 87
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1045
ESS Laboratory Sample ID: 24D1045-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 05/02/24 18:02 | | DE40101 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 05/02/24 18:02 | | DE40101 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 05/02/24 18:02 | | DE40101 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 05/02/24 18:02 | | DE40101 |
| **Aroclor 1248 [2C]** | **0.4** (0.06) | | 8082A | | 1 | 05/02/24 18:02 | | DE40101 |
| **Aroclor 1254** | **0.8** (0.06) | | 8082A | | 1 | 05/02/24 18:02 | | DE40101 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 05/02/24 18:02 | | DE40101 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 05/02/24 18:02 | | DE40101 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 05/02/24 18:02 | | DE40101 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *68 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *66 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-1 4-5
Date Sampled: 04/29/24 14:40
Percent Solids: 90
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1045
ESS Laboratory Sample ID: 24D1045-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 05/02/24 18:22 | | DE40101 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 05/02/24 18:22 | | DE40101 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 05/02/24 18:22 | | DE40101 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 05/02/24 18:22 | | DE40101 |
| **Aroclor 1248 [2C]** | **0.1** (0.06) | | 8082A | | 1 | 05/02/24 18:22 | | DE40101 |
| **Aroclor 1254** | **0.4** (0.06) | | 8082A | | 1 | 05/02/24 18:22 | | DE40101 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 05/02/24 18:22 | | DE40101 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 05/02/24 18:22 | | DE40101 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 05/02/24 18:22 | | DE40101 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *62 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *66 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CC-2 1-2
Date Sampled: 04/29/24 15:15
Percent Solids: 96
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1045
ESS Laboratory Sample ID: 24D1045-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 18:42 | | DE40101 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 18:42 | | DE40101 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 18:42 | | DE40101 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 18:42 | | DE40101 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 18:42 | | DE40101 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | | 8082A | | 1 | 05/02/24 18:42 | | DE40101 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 18:42 | | DE40101 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 18:42 | | DE40101 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 18:42 | | DE40101 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CC-2 4-5
Date Sampled: 04/29/24 15:15
Percent Solids: 96
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1045
ESS Laboratory Sample ID: 24D1045-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:01 | | DE40101 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:01 | | DE40101 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:01 | | DE40101 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:01 | | DE40101 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:01 | | DE40101 |
| **Aroclor 1254** | **0.6** (0.05) | | 8082A | | 1 | 05/02/24 19:01 | | DE40101 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:01 | | DE40101 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:01 | | DE40101 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:01 | | DE40101 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *74 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-0 DUP 1-2
Date Sampled: 04/29/24 11:00
Percent Solids: 97
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1045
ESS Laboratory Sample ID: 24D1045-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:21 | | DE40101 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:21 | | DE40101 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:21 | | DE40101 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:21 | | DE40101 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:21 | | DE40101 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:21 | | DE40101 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:21 | | DE40101 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:21 | | DE40101 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:21 | | DE40101 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-0 DUP 1-2
Date Sampled: 04/29/24 12:35
Percent Solids: 96
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1045
ESS Laboratory Sample ID: 24D1045-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:41 | | DE40101 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:41 | | DE40101 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:41 | | DE40101 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:41 | | DE40101 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:41 | | DE40101 |
| Aroclor 1254 [2C] | ND (0.05) | | 8082A | | 1 | 05/02/24 19:41 | | DE40101 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:41 | | DE40101 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:41 | | DE40101 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 19:41 | | DE40101 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *79 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CC-2 DUP 1-2
Date Sampled: 04/29/24 15:15
Percent Solids: 94
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24D1045
ESS Laboratory Sample ID: 24D1045-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/1/24 11:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/02/24 20:40 | | DE40101 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/02/24 20:40 | | DE40101 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/02/24 20:40 | | DE40101 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/02/24 20:40 | | DE40101 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/02/24 20:40 | | DE40101 |
| Aroclor 1254 [2C] | ND (0.05) | | 8082A | | 1 | 05/02/24 20:40 | | DE40101 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/02/24 20:40 | | DE40101 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/02/24 20:40 | | DE40101 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/02/24 20:40 | | DE40101 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *63 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *62 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1045

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DD43003 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0215* | | mg/kg wet | *0.02500* | | *86* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0214* | | mg/kg wet | *0.02500* | | *86* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0221* | | mg/kg wet | *0.02500* | | *88* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 92 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 99 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 99 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0220* | | mg/kg wet | *0.02500* | | *88* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0219* | | mg/kg wet | *0.02500* | | *87* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0222* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0219* | | mg/kg wet | *0.02500* | | *88* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | 0.8 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 91 | 40-140 | 0.9 | 30 | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 98 | 40-140 | 2 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 97 | 40-140 | 2 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0209* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0206* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0216* | | mg/kg wet | *0.02500* | | *86* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0213* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| **Batch DE40101 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1045

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE40101 - 3540C** | | | | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0174* | | mg/kg wet | *0.02500* | | *69* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0196* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 99 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0177* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0189* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 87 | 40-140 | 3 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 91 | 40-140 | 3 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 87 | 40-140 | 3 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 99 | 40-140 | 0.7 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0189* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0171* | | mg/kg wet | *0.02500* | | *69* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0184* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| **Matrix Spike** **Source: 24D1045-18** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg dry | 0.5262 | ND | 80 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg dry | 0.5262 | ND | 80 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg dry | 0.5262 | ND | 80 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg dry | 0.5262 | ND | 84 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1045

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE40101 - 3540C** | | | | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0186* | | mg/kg dry | *0.02631* | | *71* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0181* | | mg/kg dry | *0.02631* | | *69* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0172* | | mg/kg dry | *0.02631* | | *65* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0178* | | mg/kg dry | *0.02631* | | *67* | *30-150* | | | |
| **Matrix Spike Dup** **Source: 24D1045-18** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg dry | 0.5262 | ND | 82 | 40-140 | 3 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg dry | 0.5262 | ND | 83 | 40-140 | 3 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg dry | 0.5262 | ND | 83 | 40-140 | 3 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg dry | 0.5262 | ND | 86 | 40-140 | 2 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0191* | | mg/kg dry | *0.02631* | | *73* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0187* | | mg/kg dry | *0.02631* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0174* | | mg/kg dry | *0.02631* | | *66* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0180* | | mg/kg dry | *0.02631* | | *68* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1045

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| P | Percent difference between primary and confirmation results exceeds 40% (P). |
| LC | Lower value is used due to matrix interferences (LC). |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24D1045

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24D1045
Date Received: 4/30/2024
Project Due Date: 5/7/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered — Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 542996 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 542997 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 542998 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 542999 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 543000 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 543001 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 543002 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 8 | 543003 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 9 | 543004 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 10 | 543005 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 11 | 543006 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 12 | 543007 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 13 | 543008 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 14 | 543009 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 15 | 543010 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 16 | 543011 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 17 | 543012 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 18 | 543013 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 19 | 543014 | Yes | N/A | Yes | 4 oz. Jar | NP | |

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24D1045
Date Received: 4/30/2024

**2nd Review**
**Were all containers scanned into storage/lab?** Initials TO
Are barcode labels on correct containers? (Yes) / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: [signature] Date & Time: 4/30/24 1609
Reviewed By: [signature] Date & Time: 4/30/24 1742

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# CHAIN OF CUSTODY

ESS Lab # 24D1045

Turn Time: 5 Days
Regulatory State: Massachusetts
Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP
Reporting Limits
Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis: PCB

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB |
|---|---|---|---|---|---|---|
| 1 | 4-29-24 | 1040 | Grab | Soil | II-O 1-2 | X |
| 2 | " | 1050 | Grab | Soil | JJ-O 1-2 | X |
| 3 | " | 1100 | Grab | Soil | HH-O 1-2 | X |
| 4 | " | 1245 | Grab | Soil | GG-O 1-2 | X |
| 5 | " | 1235 | Grab | Soil | FF-O 1-2 | X |
| 6 | " | 1310 | Grab | Soil | EE-O 1-2 | X |
| 7 | " | 1340 | Grab | Soil | DD-O 1-2 | X |
| 8 | " | 1400 | Grab | Soil | CC-O 1-2 | X |
| 9 | " | 1440 | Grab | Soil | DD-I 1-2 | X |
| 10 | " | 1415 | Grab | Soil | CC-I 1-2 | X |

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — AG
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1
Number of Containers per Sample:

**Laboratory Use Only**
Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C/R

Sampled by : DB and KD
Comments: Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 4-30-24 1025 | 4/30/24 1115 | 4/30/24 1514 | 4/30/24 1519 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

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# CHAIN OF CUSTODY

ESS Lab # 24D1045.

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Reporting Limits | | |

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | | Analysis: PCB | Analysis: ~~MCP/RSD~~ |
|---|---|---|---|---|---|---|---|---|
| | 4-29-24 | ~~1010~~ | ~~Grab~~ | ~~Soil~~ | II-0 | | X | |
| | | ~~1030~~ | ~~Grab~~ | ~~Soil~~ | JJ-0 | | X | |
| 11 | | 1100 | Grab | Soil | HH-0 | 4-5 | X | |
| | | ~~1215~~ | ~~Grab~~ | ~~Soil~~ | GG-0 | | X | |
| 12 | | 1235 | Grab | Soil | FF-0 | 4-5 | X | |
| | | ~~1310~~ | ~~Grab~~ | ~~Soil~~ | EE-0 | | X | |
| 13 | | 1340 | Grab | Soil | DD-0 | 4-5 | X | |
| | | ~~1400~~ | ~~Grab~~ | ~~Soil~~ | CC-0 | | X | |
| 14 | | 1440 | Grab | Soil | DD-1 | 4-5 | X | |
| | | ~~1445~~ | ~~Grab~~ | ~~Soil~~ | CC-1 | | X | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type: | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | |
| Container Volume: | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 | |
| Preservation Code: | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 | |
| | | | | | | | | | | Number of Containers per Sample: | | 1 | |

**Laboratory Use Only**

Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C IR

Sampled by : DB and KD

Comments: Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 4-30-24 1025 | 4/30/24 10 WS | 4/30/24 15:13 | 1513 4/30/24 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

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# CHAIN OF CUSTODY

ESS Lab # 24D1045

| | | |
|---|---|---|
| **Turn Time** | 5 | Days |
| **Regulatory State** | Massachusetts | |

**Is this project for any of the following?:** ○ CT RCP ◉ MA MCP ○ RGP

**Reporting Limits**

**Electonic Deliverables** ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: PCB | MS/MSD | Hold |
|---|---|---|---|---|---|---|---|---|
| 15 | 4-29-24 | 15 15 | Grab | Soil | CC-2 1-2 | X | | |
| 16 | " | 15.15 | Grab | Soil | CC-2 4-5 | X | | |
| 17 | | 1100 | Grab | Soil | HH-0 DUP 1-2 | X | | |
| — | | 1100 | Grab | Soil | HH-0 DUP 4-5 | ~~X~~ | | X |
| 18 | | 1235 | Grab | Soil | FF-0 DUP 1-2 | X | X | |
| — | | 1235 | Grab | Soil | FF-0 DUP 4-5 | ~~X~~ | X | X |
| 19 | | 15:15 | Grab | Soil | CC-2 DUP 1-2 | X | | |
| — | " | 15:15 | Grab | Soil | CC-2 DUP 4-5 | ~~X~~ | | X |
| | | | Grab | Soil | | | | |
| | | | Grab | Soil | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | AG |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 | 10 |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 | 1 |
| | | | | | | | | | | **Number of Containers per Sample:** | | 1 | 1 |

**Laboratory Use Only**

Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C IR

**Sampled by :** DB and KD

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 4-30-24 1045 | 4/30/24 10:05 | 4/30/24 15:13 | 15:13 4/30/24 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E0026**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 1:57 pm, May 09, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

## SAMPLE RECEIPT

The following samples were received on May 01, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Low Level VOA vials were frozen by ESS Laboratory on 5/01/24 at 16:54.**
**Tetrahydrofuran is reported above the MA CAM reporting limit of 0.010 mg/kg.**

**Question I: All samples for EPH and Metals were analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E0026-01 | DD-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0026-02 | DD-5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0026-03 | DD-3 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0026-04 | HH-3 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0026-05 | BB-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

| | | | |
|---|---|---|---|
| 24E0026-06 | BB-5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0026-07 | BB-3 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0026-08 | BB-1 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0026-09 | AA-8.5 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**

24E0026-08 **Lower value is used due to matrix interferences (LC).**
Aroclor 1260

24E0026-08 **Percent difference between primary and confirmation results exceeds 40% (P).**
Aroclor 1260

**Semi-Volatile Organic Compounds**

24E0026-01 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (147% @ 30-130%)

24E0026-02 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (133% @ 30-130%)

24E0026-03 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (145% @ 30-130%)

24E0026-04 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (144% @ 30-130%)

24E0026-05 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (143% @ 30-130%)

24E0026-06 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (156% @ 30-130%)

24E0026-07 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (154% @ 30-130%)

24E0026-08 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (139% @ 30-130%)

24E0026-09 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (145% @ 30-130%)

D4E0021-CCV1 **Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration**
2,4-Dimethylphenol (99% @ 80-120%)

D4E0021-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (104% @ 40-160%), Pentachlorophenol (106% @ 40-160%)

D4E0021-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4,6-Tribromophenol (30% @ 20%), 3,3´-Dichlorobenzidine (22% @ 20%), 4-Bromophenyl-phenylether (24% @ 20%), Hexachlorobenzene (30% @ 20%), Hexachlorobutadiene (33% @ 20%)

D4E0047-CCV1 **Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration**
2,4-Dimethylphenol (96% @ 80-120%)

D4E0047-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (102% @ 40-160%), Pentachlorophenol (112% @ 40-160%)

D4E0047-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4,6-Tribromophenol (23% @ 20%), Hexachlorobenzene (22% @ 20%), Hexachlorobutadiene (24% @ 20%)

DE40104-BS1 **Blank Spike recovery is above upper control limit (B+).**

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

2,4-Dimethylphenol (130% @ 30-130%)

DE40104-BSD1 **Blank Spike recovery is above upper control limit (B+).**
2,4-Dimethylphenol (132% @ 30-130%)

**Total Metals**

24E0026-02 **RSD of replicate analysis > 20%. Reanalysis produced similar results.**
Arsenic

**Volatile Organics**

D4E0125-CCV1 **Calibration required quadratic regression (Q).**
Bromoform (105% @ 40-160%)

**Volatile Organics Low Level**

24E0026-01 **Reported above the quantitation limit; Estimated value (E).**
Naphthalene

D4E0068-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
Tetrachloroethene (27% @ 20%)

D4E0086-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
Tetrachloroethene (23% @ 20%)

DE40324-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
1,2-Dibromo-3-Chloropropane (21% @ 20%), Acetone (25% @ 20%)

DE40501-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
Tetrachloroethene (21% @ 20%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E0026-01 through 24E0026-09**

Matrices: ( ) Ground Water/Surface Water (X) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| (X) 8260 VOC CAM II A | (X) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (X) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| (X) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | (X) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (X) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | (X) MassDEP EPH CAM IV B | (X) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (X) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (X) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (X) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (X) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes (X) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (X) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes ( ) No (X)* |
| | ***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.* | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (X)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (X)* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: May 09, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-7
Date Sampled: 04/30/24 10:10
Percent Solids: 93

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.86** (0.77) | | 6010D | | 1 | KJB | 05/03/24 12:08 | 2.78 | 100 | DE40242 |
| **Barium** | **8.73** (0.77) | | 6010D | | 1 | KJB | 05/03/24 12:08 | 2.78 | 100 | DE40242 |
| Cadmium | ND (0.39) | | 6010D | | 1 | KJB | 05/03/24 12:08 | 2.78 | 100 | DE40242 |
| **Chromium** | **4.36** (0.77) | | 6010D | | 1 | KJB | 05/03/24 12:08 | 2.78 | 100 | DE40242 |
| **Lead** | **5.02** (3.85) | | 6010D | | 1 | KJB | 05/03/24 12:08 | 2.78 | 100 | DE40242 |
| Mercury | ND (0.033) | | 7471B | | 1 | AFV | 05/02/24 18:02 | 0.64 | 40 | DE40203 |
| Selenium | ND (3.85) | | 6010D | | 1 | KJB | 05/03/24 12:08 | 2.78 | 100 | DE40242 |
| Silver | ND (0.39) | | 6010D | | 1 | KJB | 05/03/24 12:08 | 2.78 | 100 | DE40242 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-7
Date Sampled: 04/30/24 10:10
Percent Solids: 93
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/5/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,1,1-Trichloroethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,1,2,2-Tetrachloroethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,1,2-Trichloroethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,1-Dichloroethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,1-Dichloroethene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,1-Dichloropropene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,2,3-Trichlorobenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,2,3-Trichloropropane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,2,4-Trichlorobenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,2,4-Trimethylbenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,2-Dibromoethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,2-Dichlorobenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,2-Dichloroethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,2-Dichloropropane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,3,5-Trimethylbenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,3-Dichlorobenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,3-Dichloropropane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,4-Dichlorobenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 1,4-Dioxane | ND (0.0878) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 2,2-Dichloropropane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 2-Butanone | ND (0.0439) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 2-Chlorotoluene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 2-Hexanone | ND (0.0439) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 4-Chlorotoluene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 4-Isopropyltoluene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| 4-Methyl-2-Pentanone | ND (0.0439) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Acetone | ND (0.0439) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Benzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Bromobenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-7
Date Sampled: 04/30/24 10:10
Percent Solids: 93
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/5/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Bromodichloromethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Bromoform | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Bromomethane | ND (0.0088) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Carbon Disulfide | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Carbon Tetrachloride | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Chlorobenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Chloroethane | ND (0.0088) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Chloroform | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Chloromethane | ND (0.0088) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| cis-1,2-Dichloroethene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| cis-1,3-Dichloropropene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Dibromochloromethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Dibromomethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Dichlorodifluoromethane | ND (0.0088) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Diethyl Ether | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Di-isopropyl ether | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Ethyl tertiary-butyl ether | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Ethylbenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Hexachlorobutadiene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Isopropylbenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Methyl tert-Butyl Ether | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Methylene Chloride | ND (0.0220) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| **Naphthalene** | **E 0.212** (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| n-Butylbenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| n-Propylbenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| sec-Butylbenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Styrene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| tert-Butylbenzene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Tertiary-amyl methyl ether | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Tetrachloroethene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-7
Date Sampled: 04/30/24 10:10
Percent Solids: 93
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/5/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0176) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Toluene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| trans-1,2-Dichloroethene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| trans-1,3-Dichloropropene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Trichloroethene | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Trichlorofluoromethane | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Vinyl Chloride | ND (0.0088) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Xylene O | ND (0.0044) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Xylene P,M | ND (0.0088) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |
| Xylenes (Total) | ND (0.0088) | | 8260D Low | | 1 | MEK | 05/05/24 18:46 | D4E0086 | DE40501 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *100 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *98 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *98 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-7
Date Sampled: 04/30/24 10:10
Percent Solids: 93
Initial Volume: 11.1g
Final Volume: 15ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD
Prepared: 5/7/24 8:00

## Volatile Organics

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,1,1-Trichloroethane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,1,2,2-Tetrachloroethane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,1,2-Trichloroethane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,1-Dichloroethane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,1-Dichloroethene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,1-Dichloropropene | ND (0.608) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,2,3-Trichlorobenzene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,2,3-Trichloropropane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,2,4-Trichlorobenzene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,2,4-Trimethylbenzene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,2-Dibromo-3-Chloropropane | ND (1.52) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,2-Dibromoethane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,2-Dichlorobenzene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,2-Dichloroethane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,2-Dichloropropane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,3,5-Trimethylbenzene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,3-Dichlorobenzene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,3-Dichloropropane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,4-Dichlorobenzene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 1,4-Dioxane - Screen | ND (30.4) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 2,2-Dichloropropane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 2-Butanone | ND (1.52) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 2-Chlorotoluene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 2-Hexanone | ND (1.52) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 4-Chlorotoluene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 4-Isopropyltoluene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| 4-Methyl-2-Pentanone | ND (1.52) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Acetone | ND (1.52) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Benzene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Bromobenzene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-7
Date Sampled: 04/30/24 10:10
Percent Solids: 93
Initial Volume: 11.1g
Final Volume: 15ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD
Prepared: 5/7/24 8:00

## Volatile Organics

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Bromodichloromethane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Bromoform | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Bromomethane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Carbon Disulfide | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Carbon Tetrachloride | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Chlorobenzene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Chloroethane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Chloroform | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Chloromethane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| cis-1,2-Dichloroethene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| cis-1,3-Dichloropropene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Dibromochloromethane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Dibromomethane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Dichlorodifluoromethane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Diethyl Ether | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Di-isopropyl ether | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Ethyl tertiary-butyl ether | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Ethylbenzene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Hexachlorobutadiene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Hexachloroethane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Isopropylbenzene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Methyl tert-Butyl Ether | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Methylene Chloride | ND (0.608) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| **Naphthalene** | **0.857** (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| n-Butylbenzene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| n-Propylbenzene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| sec-Butylbenzene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Styrene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| tert-Butylbenzene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Tertiary-amyl methyl ether | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-7
Date Sampled: 04/30/24 10:10
Percent Solids: 93
Initial Volume: 11.1g
Final Volume: 15ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD
Prepared: 5/7/24 8:00

## Volatile Organics

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Tetrahydrofuran | ND (1.52) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Toluene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| trans-1,2-Dichloroethene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| trans-1,3-Dichloropropene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Trichloroethene | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Trichlorofluoromethane | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Vinyl Chloride | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Xylene O | ND (0.304) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Xylene P,M | ND (0.608) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |
| Xylenes (Total) | ND (0.608) | | 8260D | | 1 | MD | 05/07/24 12:23 | D4E0125 | DE40724 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *103 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *94 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *98 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *93 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-7
Date Sampled: 04/30/24 10:10
Percent Solids: 93
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.082** (0.027) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 1,2,4-Trichlorobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 1,2-Dichlorobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 1,3-Dichlorobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 1,4-Dichlorobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 2,4,5-Trichlorophenol | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 2,4,6-Trichlorophenol | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 2,4-Dichlorophenol | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 2,4-Dimethylphenol | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 2,4-Dinitrophenol | ND (1.08) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 2,4-Dinitrotoluene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 2,6-Dinitrotoluene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 2-Chloronaphthalene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 2-Chlorophenol | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| **2-Methylnaphthalene** | **0.312** (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 2-Methylphenol | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 2-Nitrophenol | ND (0.541) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 3,3´-Dichlorobenzidine | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 3+4-Methylphenol | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 4-Bromophenyl-phenylether | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 4-Chloroaniline | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| 4-Nitrophenol | ND (1.08) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| Acenaphthene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| **Acenaphthylene** | **0.754** (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| Acetophenone | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| Aniline | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| **Anthracene** | **0.603** (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| Azobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| **Benzo(a)anthracene** | **1.02** (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| **Benzo(a)pyrene** | **0.933** (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| **Benzo(b)fluoranthene** | **1.04** (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-7
Date Sampled: 04/30/24 10:10
Percent Solids: 93
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Benzo(g,h,i)perylene** | **0.506** (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| **Benzo(k)fluoranthene** | **0.406** (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| bis(2-Chloroethoxy)methane | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| bis(2-Chloroethyl)ether | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| bis(2-chloroisopropyl)Ether | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| bis(2-Ethylhexyl)phthalate | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| Butylbenzylphthalate | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| **Chrysene** | **1.02** (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| Dibenzo(a,h)Anthracene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| **Dibenzofuran** | **0.432** (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| Diethylphthalate | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| Dimethylphthalate | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| Di-n-butylphthalate | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| Di-n-octylphthalate | ND (0.541) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| **Fluoranthene** | **3.07** (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| **Fluorene** | **0.586** (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| Hexachlorobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| Hexachlorobutadiene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| Hexachloroethane | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| **Indeno(1,2,3-cd)Pyrene** | **0.551** (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| Isophorone | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| **Naphthalene** | **0.786** (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| Nitrobenzene | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| N-Nitrosodimethylamine | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| Pentachlorophenol | ND (1.08) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| **Phenanthrene** | **3.23** (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| Phenol | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| **Pyrene** | **2.20** (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |
| Pyridine | ND (0.271) | | 8270E | | 1 | TJ | 05/02/24 23:26 | D4E0047 | DE40104 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *85 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-7
Date Sampled: 04/30/24 10:10
Percent Solids: 93
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *147 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *85 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *85 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *80 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *76 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *80 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *112 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-7
Date Sampled: 04/30/24 10:10
Percent Solids: 93
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/6/24 11:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:11 | | DE40619 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:11 | | DE40619 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:11 | | DE40619 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:11 | | DE40619 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:11 | | DE40619 |
| Aroclor 1254 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:11 | | DE40619 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:11 | | DE40619 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:11 | | DE40619 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:11 | | DE40619 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *65 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-7
Date Sampled: 04/30/24 10:10
Percent Solids: 93
Initial Volume: 19.7g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| 4,4´-DDE | ND (0.0027) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| 4,4´-DDT | ND (0.0027) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| Aldrin | ND (0.0027) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| alpha-BHC | ND (0.0027) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| alpha-Chlordane | ND (0.0027) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| beta-BHC | ND (0.0027) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| Chlordane (Total) | ND (0.0218) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| delta-BHC | ND (0.0027) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| Dieldrin | ND (0.0027) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| Endosulfan I | ND (0.0027) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| Endosulfan II | ND (0.0027) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| Endosulfan Sulfate | ND (0.0027) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| Endrin | ND (0.0027) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| Endrin Ketone | ND (0.0027) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0016) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| gamma-Chlordane | ND (0.0027) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| Heptachlor | ND (0.0027) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| Heptachlor Epoxide | ND (0.0027) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| Hexachlorobenzene | ND (0.0027) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| Methoxychlor | ND (0.0027) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |
| Toxaphene | ND (0.136) | | 8081B | | 1 | 05/02/24 16:24 | D4E0033 | DE40209 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *66 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-7
Date Sampled: 04/30/24 10:10
Percent Solids: 93
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 15:58

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/07/24 8:27 | D4E0111 | DE40248 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/07/24 8:27 | D4E0111 | DE40248 |
| 2,4-D | ND (0.050) | | 8151A | | 1 | 05/07/24 8:27 | D4E0111 | DE40248 |
| 2,4-DB | ND (0.050) | | 8151A | | 1 | 05/07/24 8:27 | D4E0111 | DE40248 |
| Dalapon | ND (0.048) | | 8151A | | 1 | 05/07/24 8:27 | D4E0111 | DE40248 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/07/24 8:27 | D4E0111 | DE40248 |
| Dichlorprop | ND (0.050) | | 8151A | | 1 | 05/07/24 8:27 | D4E0111 | DE40248 |
| Dinoseb | ND (0.050) | | 8151A | | 1 | 05/07/24 8:27 | D4E0111 | DE40248 |
| MCPA | ND (2.47) | | 8151A | | 1 | 05/07/24 8:27 | D4E0111 | DE40248 |
| MCPP | ND (2.49) | | 8151A | | 1 | 05/07/24 8:27 | D4E0111 | DE40248 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-7
Date Sampled: 04/30/24 10:10
Percent Solids: 93
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/1/24 19:02

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **53.2** (10.8) | | 8100M | | 1 | 05/02/24 21:14 | | DE40151 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *74 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-7
Date Sampled: 04/30/24 10:10
Percent Solids: 93

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-01
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 72** (5) | | 9050A | | 1 | EAM | 05/01/24 20:59 | umhos/cm | DE40162 |
| **Corrosivity (pH)** | **7.95** (N/A) | | 9045 | | 1 | EAM | 05/01/24 18:58 | S.U. | DE40148 |
| **Corrosivity (pH) Sample Temp** | **19.7** | | 2550B | | 1 | EAM | 05/01/24 18:58 | °C | DE40148 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 18:30 | °F | DE40156 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 05/01/24 19:46 | ml/5 min | DE40157 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/02/24 20:34 | mg/kg | DE40249 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/02/24 20:34 | mg/kg | DE40249 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-5
Date Sampled: 04/30/24 10:00
Percent Solids: 93

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **X* 1.31** (0.79) | | 6010D | | 1 | KJB | 05/06/24 19:05 | 2.71 | 100 | DE40242 |
| **Barium** | **5.93** (0.79) | | 6010D | | 1 | KJB | 05/03/24 12:19 | 2.71 | 100 | DE40242 |
| Cadmium | ND (0.40) | | 6010D | | 1 | KJB | 05/03/24 12:19 | 2.71 | 100 | DE40242 |
| **Chromium** | **4.29** (0.79) | | 6010D | | 1 | KJB | 05/03/24 12:19 | 2.71 | 100 | DE40242 |
| **Lead** | **9.18** (3.96) | | 6010D | | 1 | KJB | 05/03/24 12:19 | 2.71 | 100 | DE40242 |
| **Mercury** | **0.035** (0.034) | | 7471B | | 1 | AFV | 05/02/24 18:04 | 0.62 | 40 | DE40203 |
| Selenium | ND (3.96) | | 6010D | | 1 | KJB | 05/03/24 12:19 | 2.71 | 100 | DE40242 |
| Silver | ND (0.40) | | 6010D | | 1 | KJB | 05/03/24 12:19 | 2.71 | 100 | DE40242 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-5
Date Sampled: 04/30/24 10:00
Percent Solids: 93
Initial Volume: 5.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,1,1-Trichloroethane | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,1,2,2-Tetrachloroethane | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,1,2-Trichloroethane | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,1-Dichloroethane | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,1-Dichloroethene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,1-Dichloropropene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,2,3-Trichlorobenzene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,2,3-Trichloropropane | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,2,4-Trichlorobenzene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,2,4-Trimethylbenzene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,2-Dibromoethane | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,2-Dichlorobenzene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,2-Dichloroethane | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,2-Dichloropropane | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,3,5-Trimethylbenzene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,3-Dichlorobenzene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,3-Dichloropropane | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,4-Dichlorobenzene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 1,4-Dioxane | ND (0.101) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 2,2-Dichloropropane | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 2-Butanone | ND (0.0506) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 2-Chlorotoluene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 2-Hexanone | ND (0.0506) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 4-Chlorotoluene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 4-Isopropyltoluene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| 4-Methyl-2-Pentanone | ND (0.0506) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Acetone | ND (0.0506) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Benzene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Bromobenzene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-5
Date Sampled: 04/30/24 10:00
Percent Solids: 93
Initial Volume: 5.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Bromodichloromethane | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Bromoform | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Bromomethane | ND (0.0101) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Carbon Disulfide | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Carbon Tetrachloride | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Chlorobenzene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Chloroethane | ND (0.0101) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Chloroform | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Chloromethane | ND (0.0101) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| cis-1,2-Dichloroethene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| cis-1,3-Dichloropropene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Dibromochloromethane | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Dibromomethane | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Dichlorodifluoromethane | ND (0.0101) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Diethyl Ether | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Di-isopropyl ether | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Ethyl tertiary-butyl ether | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Ethylbenzene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Hexachlorobutadiene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Isopropylbenzene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Methyl tert-Butyl Ether | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Methylene Chloride | ND (0.0253) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Naphthalene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| n-Butylbenzene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| n-Propylbenzene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| sec-Butylbenzene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Styrene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| tert-Butylbenzene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Tertiary-amyl methyl ether | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Tetrachloroethene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-5
Date Sampled: 04/30/24 10:00
Percent Solids: 93
Initial Volume: 5.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0202) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Toluene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| trans-1,2-Dichloroethene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| trans-1,3-Dichloropropene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Trichloroethene | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Trichlorofluoromethane | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Vinyl Chloride | ND (0.0101) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Xylene O | ND (0.0051) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Xylene P,M | ND (0.0101) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |
| Xylenes (Total) | ND (0.0101) | | 8260D Low | | 1 | MEK | 05/03/24 21:18 | D4E0068 | DE40324 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *107 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *97 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *104 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *96 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-5
Date Sampled: 04/30/24 10:00
Percent Solids: 93
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 1,2,4-Trichlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 1,2-Dichlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 1,3-Dichlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 1,4-Dichlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 2,4,5-Trichlorophenol | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 2,4,6-Trichlorophenol | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 2,4-Dichlorophenol | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 2,4-Dimethylphenol | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 2,4-Dinitrophenol | ND (1.11) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 2,4-Dinitrotoluene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 2,6-Dinitrotoluene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 2-Chloronaphthalene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 2-Chlorophenol | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 2-Methylnaphthalene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 2-Methylphenol | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 2-Nitrophenol | ND (0.556) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 3,3´-Dichlorobenzidine | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 3+4-Methylphenol | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 4-Bromophenyl-phenylether | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 4-Chloroaniline | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| 4-Nitrophenol | ND (1.11) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Acenaphthene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Acenaphthylene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Acetophenone | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Aniline | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Anthracene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Azobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Benzo(a)anthracene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Benzo(a)pyrene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Benzo(b)fluoranthene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-5
Date Sampled: 04/30/24 10:00
Percent Solids: 93
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Benzo(k)fluoranthene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| bis(2-Chloroethoxy)methane | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| bis(2-Chloroethyl)ether | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| bis(2-chloroisopropyl)Ether | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| bis(2-Ethylhexyl)phthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Butylbenzylphthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Chrysene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Dibenzo(a,h)Anthracene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Dibenzofuran | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Diethylphthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Dimethylphthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Di-n-butylphthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Di-n-octylphthalate | ND (0.556) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Fluoranthene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Fluorene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Hexachlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Hexachlorobutadiene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Hexachloroethane | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Indeno(1,2,3-cd)Pyrene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Isophorone | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Naphthalene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Nitrobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| N-Nitrosodimethylamine | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Pentachlorophenol | ND (1.11) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Phenanthrene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Phenol | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Pyrene | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |
| Pyridine | ND (0.278) | | 8270E | | 1 | TJ | 05/02/24 23:57 | D4E0047 | DE40104 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *77 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-5
Date Sampled: 04/30/24 10:00
Percent Solids: 93
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *133 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *77 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *80 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *76 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *69 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *74 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *104 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-5
Date Sampled: 04/30/24 10:00
Percent Solids: 93
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/6/24 11:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:31 | | DE40619 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:31 | | DE40619 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:31 | | DE40619 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:31 | | DE40619 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:31 | | DE40619 |
| **Aroclor 1254 [2C]** | **0.08** (0.05) | | 8082A | | 1 | 05/07/24 20:31 | | DE40619 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:31 | | DE40619 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:31 | | DE40619 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:31 | | DE40619 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *79 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-5
Date Sampled: 04/30/24 10:00
Percent Solids: 93
Initial Volume: 20.1g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| 4,4´-DDE | ND (0.0027) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| 4,4´-DDT | ND (0.0027) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| Aldrin | ND (0.0027) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| alpha-BHC | ND (0.0027) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| alpha-Chlordane | ND (0.0027) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| beta-BHC | ND (0.0027) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| Chlordane (Total) | ND (0.0214) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| delta-BHC | ND (0.0027) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| Dieldrin | ND (0.0027) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| Endosulfan I | ND (0.0027) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| Endosulfan II | ND (0.0027) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| Endosulfan Sulfate | ND (0.0027) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| Endrin | ND (0.0027) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| Endrin Ketone | ND (0.0027) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0016) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| gamma-Chlordane | ND (0.0027) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| Heptachlor | ND (0.0027) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| Heptachlor Epoxide | ND (0.0027) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| Hexachlorobenzene | ND (0.0027) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| Methoxychlor | ND (0.0027) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |
| Toxaphene | ND (0.133) | | 8081B | | 1 | 05/02/24 17:47 | D4E0033 | DE40209 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *93 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *86 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-5
Date Sampled: 04/30/24 10:00
Percent Solids: 93
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 15:58

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/07/24 8:55 | D4E0111 | DE40248 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/07/24 8:55 | D4E0111 | DE40248 |
| 2,4-D | ND (0.049) | | 8151A | | 1 | 05/07/24 8:55 | D4E0111 | DE40248 |
| 2,4-DB | ND (0.050) | | 8151A | | 1 | 05/07/24 8:55 | D4E0111 | DE40248 |
| Dalapon | ND (0.048) | | 8151A | | 1 | 05/07/24 8:55 | D4E0111 | DE40248 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/07/24 8:55 | D4E0111 | DE40248 |
| Dichlorprop | ND (0.049) | | 8151A | | 1 | 05/07/24 8:55 | D4E0111 | DE40248 |
| Dinoseb | ND (0.050) | | 8151A | | 1 | 05/07/24 8:55 | D4E0111 | DE40248 |
| MCPA | ND (2.45) | | 8151A | | 1 | 05/07/24 8:55 | D4E0111 | DE40248 |
| MCPP | ND (2.47) | | 8151A | | 1 | 05/07/24 8:55 | D4E0111 | DE40248 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-5
Date Sampled: 04/30/24 10:00
Percent Solids: 93
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/1/24 19:02

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (10.5) | | 8100M | | 1 | 05/02/24 21:53 | | DE40151 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *77 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-5
Date Sampled: 04/30/24 10:00
Percent Solids: 93

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-02
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 59** (5) | | 9050A | | 1 | EAM | 05/01/24 20:59 | umhos/cm | DE40162 |
| **Corrosivity (pH)** | **8.95** (N/A) | | 9045 | | 1 | EAM | 05/01/24 18:58 | S.U. | DE40148 |
| **Corrosivity (pH) Sample Temp** | **19.7** | | 2550B | | 1 | EAM | 05/01/24 18:58 | °C | DE40148 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 18:30 | °F | DE40156 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 05/01/24 19:46 | ml/5 min | DE40157 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/02/24 20:34 | mg/kg | DE40249 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/02/24 20:34 | mg/kg | DE40249 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-3
Date Sampled: 04/30/24 08:40
Percent Solids: 93

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-03
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.35** (0.74) | | 6010D | | 1 | KJB | 05/06/24 19:15 | 2.91 | 100 | DE40242 |
| **Barium** | **15.2** (0.74) | | 6010D | | 1 | KJB | 05/03/24 12:37 | 2.91 | 100 | DE40242 |
| Cadmium | ND (0.37) | | 6010D | | 1 | KJB | 05/03/24 12:37 | 2.91 | 100 | DE40242 |
| **Chromium** | **10.8** (0.74) | | 6010D | | 1 | KJB | 05/03/24 12:37 | 2.91 | 100 | DE40242 |
| **Lead** | **19.5** (3.68) | | 6010D | | 1 | KJB | 05/03/24 12:37 | 2.91 | 100 | DE40242 |
| **Mercury** | **0.058** (0.031) | | 7471B | | 1 | AFV | 05/02/24 18:06 | 0.68 | 40 | DE40203 |
| Selenium | ND (3.68) | | 6010D | | 1 | KJB | 05/03/24 12:37 | 2.91 | 100 | DE40242 |
| Silver | ND (0.37) | | 6010D | | 1 | KJB | 05/03/24 12:37 | 2.91 | 100 | DE40242 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-3
Date Sampled: 04/30/24 08:40
Percent Solids: 93
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,1,1-Trichloroethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,1,2,2-Tetrachloroethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,1,2-Trichloroethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,1-Dichloroethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,1-Dichloroethene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,1-Dichloropropene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,2,3-Trichlorobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,2,3-Trichloropropane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,2,4-Trichlorobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,2,4-Trimethylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,2-Dibromoethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,2-Dichlorobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,2-Dichloroethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,2-Dichloropropane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,3,5-Trimethylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,3-Dichlorobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,3-Dichloropropane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,4-Dichlorobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 1,4-Dioxane | ND (0.0909) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 2,2-Dichloropropane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 2-Butanone | ND (0.0454) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 2-Chlorotoluene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 2-Hexanone | ND (0.0454) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 4-Chlorotoluene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 4-Isopropyltoluene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| 4-Methyl-2-Pentanone | ND (0.0454) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Acetone | ND (0.0454) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Benzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Bromobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-3
Date Sampled: 04/30/24 08:40
Percent Solids: 93
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Bromodichloromethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Bromoform | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Bromomethane | ND (0.0091) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Carbon Disulfide | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Carbon Tetrachloride | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Chlorobenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Chloroethane | ND (0.0091) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Chloroform | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Chloromethane | ND (0.0091) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| cis-1,2-Dichloroethene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| cis-1,3-Dichloropropene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Dibromochloromethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Dibromomethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Dichlorodifluoromethane | ND (0.0091) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Diethyl Ether | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Di-isopropyl ether | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Ethyl tertiary-butyl ether | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Ethylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Hexachlorobutadiene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Isopropylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Methyl tert-Butyl Ether | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Methylene Chloride | ND (0.0227) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Naphthalene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| n-Butylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| n-Propylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| sec-Butylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Styrene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| tert-Butylbenzene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Tertiary-amyl methyl ether | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Tetrachloroethene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-3
Date Sampled: 04/30/24 08:40
Percent Solids: 93
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0182) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Toluene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| trans-1,2-Dichloroethene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| trans-1,3-Dichloropropene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Trichloroethene | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Trichlorofluoromethane | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Vinyl Chloride | ND (0.0091) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Xylene O | ND (0.0045) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Xylene P,M | ND (0.0091) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |
| Xylenes (Total) | ND (0.0091) | | 8260D Low | | 1 | MEK | 05/03/24 20:52 | D4E0068 | DE40324 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *104 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *97 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *102 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *97 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-3
Date Sampled: 04/30/24 08:40
Percent Solids: 93
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 1,2,4-Trichlorobenzene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 1,2-Dichlorobenzene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 1,3-Dichlorobenzene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 1,4-Dichlorobenzene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 2,4,5-Trichlorophenol | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 2,4,6-Trichlorophenol | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 2,4-Dichlorophenol | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 2,4-Dimethylphenol | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 2,4-Dinitrophenol | ND (1.08) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 2,4-Dinitrotoluene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 2,6-Dinitrotoluene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 2-Chloronaphthalene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 2-Chlorophenol | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 2-Methylnaphthalene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 2-Methylphenol | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 2-Nitrophenol | ND (0.539) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 3,3´-Dichlorobenzidine | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 3+4-Methylphenol | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 4-Bromophenyl-phenylether | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 4-Chloroaniline | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| 4-Nitrophenol | ND (1.08) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Acenaphthene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Acenaphthylene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Acetophenone | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Aniline | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Anthracene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Azobenzene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Benzo(a)anthracene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Benzo(a)pyrene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Benzo(b)fluoranthene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-3
Date Sampled: 04/30/24 08:40
Percent Solids: 93
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Benzo(k)fluoranthene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| bis(2-Chloroethoxy)methane | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| bis(2-Chloroethyl)ether | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| bis(2-chloroisopropyl)Ether | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| bis(2-Ethylhexyl)phthalate | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Butylbenzylphthalate | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Chrysene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Dibenzo(a,h)Anthracene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Dibenzofuran | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Diethylphthalate | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Dimethylphthalate | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Di-n-butylphthalate | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Di-n-octylphthalate | ND (0.539) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Fluoranthene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Fluorene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Hexachlorobenzene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Hexachlorobutadiene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Hexachloroethane | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Indeno(1,2,3-cd)Pyrene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Isophorone | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Naphthalene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Nitrobenzene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| N-Nitrosodimethylamine | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Pentachlorophenol | ND (1.08) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Phenanthrene | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Phenol | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| **Pyrene** | **0.272** (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |
| Pyridine | ND (0.269) | | 8270E | | 1 | TJ | 05/03/24 0:27 | D4E0047 | DE40104 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *74 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-3
Date Sampled: 04/30/24 08:40
Percent Solids: 93
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *145 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *77 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *85 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *74 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *73 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *74 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *115 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-3
Date Sampled: 04/30/24 08:40
Percent Solids: 93
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/6/24 11:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:51 | | DE40619 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:51 | | DE40619 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:51 | | DE40619 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:51 | | DE40619 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:51 | | DE40619 |
| **Aroclor 1254 [2C]** | **0.09** (0.05) | | 8082A | | 1 | 05/07/24 20:51 | | DE40619 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:51 | | DE40619 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:51 | | DE40619 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/07/24 20:51 | | DE40619 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *59 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-3
Date Sampled: 04/30/24 08:40
Percent Solids: 93
Initial Volume: 20.9g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0026) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| 4,4´-DDE | ND (0.0026) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| 4,4´-DDT | ND (0.0026) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| Aldrin | ND (0.0026) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| alpha-BHC | ND (0.0026) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| alpha-Chlordane | ND (0.0026) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| beta-BHC | ND (0.0026) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| Chlordane (Total) | ND (0.0205) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| delta-BHC | ND (0.0026) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| Dieldrin | ND (0.0026) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| Endosulfan I | ND (0.0026) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| Endosulfan II | ND (0.0026) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| Endosulfan Sulfate | ND (0.0026) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| Endrin | ND (0.0026) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| Endrin Ketone | ND (0.0026) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0015) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| gamma-Chlordane | ND (0.0026) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| Heptachlor | ND (0.0026) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| Heptachlor Epoxide | ND (0.0026) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| Hexachlorobenzene | ND (0.0026) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| Methoxychlor | ND (0.0026) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |
| Toxaphene | ND (0.128) | | 8081B | | 1 | 05/02/24 18:15 | D4E0033 | DE40209 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *87 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-3
Date Sampled: 04/30/24 08:40
Percent Solids: 93
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 15:58

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/07/24 9:24 | D4E0111 | DE40248 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/07/24 9:24 | D4E0111 | DE40248 |
| 2,4-D | ND (0.050) | | 8151A | | 1 | 05/07/24 9:24 | D4E0111 | DE40248 |
| 2,4-DB | ND (0.050) | | 8151A | | 1 | 05/07/24 9:24 | D4E0111 | DE40248 |
| Dalapon | ND (0.048) | | 8151A | | 1 | 05/07/24 9:24 | D4E0111 | DE40248 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/07/24 9:24 | D4E0111 | DE40248 |
| Dichlorprop | ND (0.050) | | 8151A | | 1 | 05/07/24 9:24 | D4E0111 | DE40248 |
| Dinoseb | ND (0.050) | | 8151A | | 1 | 05/07/24 9:24 | D4E0111 | DE40248 |
| MCPA | ND (2.47) | | 8151A | | 1 | 05/07/24 9:24 | D4E0111 | DE40248 |
| MCPP | ND (2.49) | | 8151A | | 1 | 05/07/24 9:24 | D4E0111 | DE40248 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-3
Date Sampled: 04/30/24 08:40
Percent Solids: 93
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 16:38

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **146** (53.9) | | 8100M | | 5 | 05/08/24 2:02 | | DE40661 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *72 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-3
Date Sampled: 04/30/24 08:40
Percent Solids: 93

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-03
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 57** (5) | | 9050A | | 1 | EAM | 05/01/24 20:59 | umhos/cm | DE40162 |
| **Corrosivity (pH)** | **8.06** (N/A) | | 9045 | | 1 | EAM | 05/01/24 18:58 | S.U. | DE40148 |
| **Corrosivity (pH) Sample Temp** | **20.0** | | 2550B | | 1 | EAM | 05/01/24 18:58 | °C | DE40148 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 18:30 | °F | DE40156 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 05/01/24 19:46 | ml/5 min | DE40157 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/02/24 20:34 | mg/kg | DE40249 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/02/24 20:34 | mg/kg | DE40249 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-3
Date Sampled: 04/30/24 08:50
Percent Solids: 93

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.67** (0.81) | | 6010D | | 1 | KJB | 05/03/24 12:39 | 2.65 | 100 | DE40242 |
| **Barium** | **12.9** (0.81) | | 6010D | | 1 | KJB | 05/03/24 12:39 | 2.65 | 100 | DE40242 |
| Cadmium | ND (0.40) | | 6010D | | 1 | KJB | 05/03/24 12:39 | 2.65 | 100 | DE40242 |
| **Chromium** | **4.97** (0.81) | | 6010D | | 1 | KJB | 05/03/24 12:39 | 2.65 | 100 | DE40242 |
| **Lead** | **18.8** (4.05) | | 6010D | | 1 | KJB | 05/03/24 12:39 | 2.65 | 100 | DE40242 |
| Mercury | ND (0.031) | | 7471B | | 1 | AFV | 05/02/24 18:08 | 0.68 | 40 | DE40203 |
| Selenium | ND (4.05) | | 6010D | | 1 | KJB | 05/03/24 12:39 | 2.65 | 100 | DE40242 |
| Silver | ND (0.40) | | 6010D | | 1 | KJB | 05/03/24 12:39 | 2.65 | 100 | DE40242 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-3
Date Sampled: 04/30/24 08:50
Percent Solids: 93
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,1,1-Trichloroethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,1,2,2-Tetrachloroethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,1,2-Trichloroethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,1-Dichloroethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,1-Dichloroethene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,1-Dichloropropene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,2,3-Trichlorobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,2,3-Trichloropropane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,2,4-Trichlorobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,2,4-Trimethylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,2-Dibromoethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,2-Dichlorobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,2-Dichloroethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,2-Dichloropropane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,3,5-Trimethylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,3-Dichlorobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,3-Dichloropropane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,4-Dichlorobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 1,4-Dioxane | ND (0.0925) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 2,2-Dichloropropane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 2-Butanone | ND (0.0463) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 2-Chlorotoluene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 2-Hexanone | ND (0.0463) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 4-Chlorotoluene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 4-Isopropyltoluene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| 4-Methyl-2-Pentanone | ND (0.0463) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Acetone | ND (0.0463) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Benzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Bromobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-3
Date Sampled: 04/30/24 08:50
Percent Solids: 93
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Bromodichloromethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Bromoform | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Bromomethane | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Carbon Disulfide | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Carbon Tetrachloride | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Chlorobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Chloroethane | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Chloroform | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Chloromethane | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| cis-1,2-Dichloroethene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| cis-1,3-Dichloropropene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Dibromochloromethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Dibromomethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Dichlorodifluoromethane | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Diethyl Ether | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Di-isopropyl ether | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Ethyl tertiary-butyl ether | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Ethylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Hexachlorobutadiene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Isopropylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Methyl tert-Butyl Ether | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Methylene Chloride | ND (0.0231) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| **Naphthalene** | **0.0131** (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| n-Butylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| n-Propylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| sec-Butylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Styrene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| tert-Butylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Tertiary-amyl methyl ether | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Tetrachloroethene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-3
Date Sampled: 04/30/24 08:50
Percent Solids: 93
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0185) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Toluene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| trans-1,2-Dichloroethene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| trans-1,3-Dichloropropene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Trichloroethene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Trichlorofluoromethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Vinyl Chloride | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Xylene O | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Xylene P,M | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |
| Xylenes (Total) | ND (0.0093) | | 8260D Low | | 1 | MEK | 05/03/24 20:27 | D4E0068 | DE40324 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *108 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *99 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *105 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *98 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-3
Date Sampled: 04/30/24 08:50
Percent Solids: 93
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.037** (0.027) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 1,2,4-Trichlorobenzene | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 1,2-Dichlorobenzene | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 1,3-Dichlorobenzene | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 1,4-Dichlorobenzene | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 2,4,5-Trichlorophenol | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 2,4,6-Trichlorophenol | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 2,4-Dichlorophenol | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 2,4-Dimethylphenol | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 2,4-Dinitrophenol | ND (1.09) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 2,4-Dinitrotoluene | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 2,6-Dinitrotoluene | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 2-Chloronaphthalene | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 2-Chlorophenol | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 2-Methylnaphthalene | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 2-Methylphenol | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 2-Nitrophenol | ND (0.545) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 3,3´-Dichlorobenzidine | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 3+4-Methylphenol | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 4-Bromophenyl-phenylether | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 4-Chloroaniline | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| 4-Nitrophenol | ND (1.09) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Acenaphthene | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Acenaphthylene | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Acetophenone | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Aniline | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| **Anthracene** | **0.465** (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Azobenzene | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| **Benzo(a)anthracene** | **0.475** (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| **Benzo(a)pyrene** | **0.398** (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| **Benzo(b)fluoranthene** | **0.411** (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-3
Date Sampled: 04/30/24 08:50
Percent Solids: 93
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Benzo(k)fluoranthene | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| bis(2-Chloroethoxy)methane | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| bis(2-Chloroethyl)ether | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| bis(2-chloroisopropyl)Ether | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| bis(2-Ethylhexyl)phthalate | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Butylbenzylphthalate | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| **Chrysene** | **0.424** (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Dibenzo(a,h)Anthracene | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Dibenzofuran | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Diethylphthalate | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Dimethylphthalate | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Di-n-butylphthalate | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Di-n-octylphthalate | ND (0.545) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| **Fluoranthene** | **1.28** (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Fluorene | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Hexachlorobenzene | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Hexachlorobutadiene | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Hexachloroethane | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Indeno(1,2,3-cd)Pyrene | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Isophorone | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| **Naphthalene** | **0.348** (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Nitrobenzene | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| N-Nitrosodimethylamine | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Pentachlorophenol | ND (1.09) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| **Phenanthrene** | **1.56** (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Phenol | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| **Pyrene** | **0.972** (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |
| Pyridine | ND (0.272) | | 8270E | | 1 | TJ | 05/03/24 0:57 | D4E0047 | DE40104 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *74 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-3
Date Sampled: 04/30/24 08:50
Percent Solids: 93
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *144 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *76 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *79 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *74 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *73 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *73 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *112 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-3
Date Sampled: 04/30/24 08:50
Percent Solids: 93
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/6/24 11:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:11 | | DE40619 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:11 | | DE40619 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:11 | | DE40619 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:11 | | DE40619 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:11 | | DE40619 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | | 8082A | | 1 | 05/07/24 21:11 | | DE40619 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:11 | | DE40619 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:11 | | DE40619 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:11 | | DE40619 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-3
Date Sampled: 04/30/24 08:50
Percent Solids: 93
Initial Volume: 19g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0028) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| 4,4´-DDE | ND (0.0028) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| 4,4´-DDT | ND (0.0028) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| Aldrin | ND (0.0028) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| alpha-BHC | ND (0.0028) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| alpha-Chlordane | ND (0.0028) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| beta-BHC | ND (0.0028) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| Chlordane (Total) | ND (0.0226) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| delta-BHC | ND (0.0028) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| Dieldrin | ND (0.0028) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| Endosulfan I | ND (0.0028) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| Endosulfan II | ND (0.0028) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| Endosulfan Sulfate | ND (0.0028) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| Endrin | ND (0.0028) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| Endrin Ketone | ND (0.0028) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0017) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| gamma-Chlordane | ND (0.0028) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| Heptachlor | ND (0.0028) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| Heptachlor Epoxide | ND (0.0028) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| Hexachlorobenzene | ND (0.0028) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| Methoxychlor | ND (0.0028) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |
| Toxaphene | ND (0.141) | | 8081B | | 1 | 05/02/24 18:42 | D4E0033 | DE40209 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *81 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *66 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-3
Date Sampled: 04/30/24 08:50
Percent Solids: 93
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 15:58

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/07/24 9:53 | D4E0111 | DE40248 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/07/24 9:53 | D4E0111 | DE40248 |
| 2,4-D | ND (0.049) | | 8151A | | 1 | 05/07/24 9:53 | D4E0111 | DE40248 |
| 2,4-DB | ND (0.050) | | 8151A | | 1 | 05/07/24 9:53 | D4E0111 | DE40248 |
| Dalapon | ND (0.048) | | 8151A | | 1 | 05/07/24 9:53 | D4E0111 | DE40248 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/07/24 9:53 | D4E0111 | DE40248 |
| Dichlorprop | ND (0.049) | | 8151A | | 1 | 05/07/24 9:53 | D4E0111 | DE40248 |
| Dinoseb | ND (0.050) | | 8151A | | 1 | 05/07/24 9:53 | D4E0111 | DE40248 |
| MCPA | ND (2.45) | | 8151A | | 1 | 05/07/24 9:53 | D4E0111 | DE40248 |
| MCPP | ND (2.47) | | 8151A | | 1 | 05/07/24 9:53 | D4E0111 | DE40248 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *88 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-3
Date Sampled: 04/30/24 08:50
Percent Solids: 93
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/1/24 19:02

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (11.2) | | 8100M | | 1 | 05/02/24 22:32 | | DE40151 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *79 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-3
Date Sampled: 04/30/24 08:50
Percent Solids: 93

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-04
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 7** (5) | | 9050A | | 1 | EAM | 05/01/24 20:59 | umhos/cm | DE40162 |
| **Corrosivity (pH)** | **7.12** (N/A) | | 9045 | | 1 | EAM | 05/01/24 18:58 | S.U. | DE40148 |
| **Corrosivity (pH) Sample Temp** | **20.0** | | 2550B | | 1 | EAM | 05/01/24 18:58 | °C | DE40148 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 18:30 | °F | DE40156 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 05/01/24 19:53 | ml/5 min | DE40157 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/02/24 20:34 | mg/kg | DE40249 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/02/24 20:34 | mg/kg | DE40249 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-7
Date Sampled: 04/30/24 10:50
Percent Solids: 90

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-05
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.74** (0.89) | | 6010D | | 1 | KJB | 05/03/24 12:41 | 2.5 | 100 | DE40242 |
| **Barium** | **24.0** (0.89) | | 6010D | | 1 | KJB | 05/03/24 12:41 | 2.5 | 100 | DE40242 |
| Cadmium | ND (0.44) | | 6010D | | 1 | KJB | 05/03/24 12:41 | 2.5 | 100 | DE40242 |
| **Chromium** | **4.85** (0.89) | | 6010D | | 1 | KJB | 05/03/24 12:41 | 2.5 | 100 | DE40242 |
| **Lead** | **96.0** (4.44) | | 6010D | | 1 | KJB | 05/03/24 12:41 | 2.5 | 100 | DE40242 |
| Mercury | ND (0.035) | | 7471B | | 1 | AFV | 05/02/24 18:14 | 0.63 | 40 | DE40203 |
| Selenium | ND (4.44) | | 6010D | | 1 | KJB | 05/03/24 12:41 | 2.5 | 100 | DE40242 |
| Silver | ND (0.44) | | 6010D | | 1 | KJB | 05/03/24 12:41 | 2.5 | 100 | DE40242 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-7
Date Sampled: 04/30/24 10:50
Percent Solids: 90
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,1,1-Trichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,1,2,2-Tetrachloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,1,2-Trichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,1-Dichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,1-Dichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,1-Dichloropropene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,2,3-Trichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,2,3-Trichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,2,4-Trichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,2,4-Trimethylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,2-Dibromoethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,2-Dichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,2-Dichloroethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,2-Dichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,3,5-Trimethylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,3-Dichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,3-Dichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,4-Dichlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 1,4-Dioxane | ND (0.0942) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 2,2-Dichloropropane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 2-Butanone | ND (0.0471) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 2-Chlorotoluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 2-Hexanone | ND (0.0471) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 4-Chlorotoluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 4-Isopropyltoluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| 4-Methyl-2-Pentanone | ND (0.0471) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Acetone | ND (0.0471) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Benzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Bromobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-7
Date Sampled: 04/30/24 10:50
Percent Solids: 90
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Bromodichloromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Bromoform | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Bromomethane | ND (0.0094) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Carbon Disulfide | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Carbon Tetrachloride | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Chlorobenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Chloroethane | ND (0.0094) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Chloroform | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Chloromethane | ND (0.0094) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| cis-1,2-Dichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| cis-1,3-Dichloropropene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Dibromochloromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Dibromomethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Dichlorodifluoromethane | ND (0.0094) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Diethyl Ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Di-isopropyl ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Ethyl tertiary-butyl ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Ethylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Hexachlorobutadiene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Isopropylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Methyl tert-Butyl Ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Methylene Chloride | ND (0.0235) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Naphthalene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| n-Butylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| n-Propylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| sec-Butylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Styrene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| tert-Butylbenzene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Tertiary-amyl methyl ether | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Tetrachloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-7
Date Sampled: 04/30/24 10:50
Percent Solids: 90
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0188) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Toluene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| trans-1,2-Dichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| trans-1,3-Dichloropropene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Trichloroethene | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Trichlorofluoromethane | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Vinyl Chloride | ND (0.0094) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Xylene O | ND (0.0047) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Xylene P,M | ND (0.0094) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |
| Xylenes (Total) | ND (0.0094) | | 8260D Low | | 1 | MEK | 05/03/24 20:01 | D4E0068 | DE40324 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *105 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *97 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *104 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *97 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-7
Date Sampled: 04/30/24 10:50
Percent Solids: 90
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 1,2,4-Trichlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 1,2-Dichlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 1,3-Dichlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 1,4-Dichlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 2,4,5-Trichlorophenol | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 2,4,6-Trichlorophenol | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 2,4-Dichlorophenol | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 2,4-Dimethylphenol | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 2,4-Dinitrophenol | ND (1.11) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 2,4-Dinitrotoluene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 2,6-Dinitrotoluene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 2-Chloronaphthalene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 2-Chlorophenol | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 2-Methylnaphthalene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 2-Methylphenol | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 2-Nitrophenol | ND (0.556) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 3,3´-Dichlorobenzidine | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 3+4-Methylphenol | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 4-Bromophenyl-phenylether | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 4-Chloroaniline | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| 4-Nitrophenol | ND (1.11) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Acenaphthene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Acenaphthylene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Acetophenone | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Aniline | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Anthracene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Azobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Benzo(a)anthracene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Benzo(a)pyrene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Benzo(b)fluoranthene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-7
Date Sampled: 04/30/24 10:50
Percent Solids: 90
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Benzo(k)fluoranthene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| bis(2-Chloroethoxy)methane | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| bis(2-Chloroethyl)ether | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| bis(2-chloroisopropyl)Ether | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| bis(2-Ethylhexyl)phthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Butylbenzylphthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Chrysene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Dibenzo(a,h)Anthracene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Dibenzofuran | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Diethylphthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Dimethylphthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Di-n-butylphthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Di-n-octylphthalate | ND (0.556) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| **Fluoranthene** | **0.418** (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Fluorene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Hexachlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Hexachlorobutadiene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Hexachloroethane | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Indeno(1,2,3-cd)Pyrene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Isophorone | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Naphthalene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Nitrobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| N-Nitrosodimethylamine | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Pentachlorophenol | ND (1.11) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Phenanthrene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Phenol | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| **Pyrene** | **0.396** (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |
| Pyridine | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 1:28 | D4E0047 | DE40104 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *79 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-7
Date Sampled: 04/30/24 10:50
Percent Solids: 90
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *143 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *79 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *83 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *75 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *74 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *76 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *117 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-7
Date Sampled: 04/30/24 10:50
Percent Solids: 90
Initial Volume: 20.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/6/24 11:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:30 | | DE40619 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:30 | | DE40619 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:30 | | DE40619 |
| **Aroclor 1242 [2C]** | **0.08** (0.05) | | 8082A | | 1 | 05/07/24 21:30 | | DE40619 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:30 | | DE40619 |
| **Aroclor 1254** | **0.06** (0.05) | | 8082A | | 1 | 05/07/24 21:30 | | DE40619 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:30 | | DE40619 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:30 | | DE40619 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:30 | | DE40619 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *76 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-7
Date Sampled: 04/30/24 10:50
Percent Solids: 90
Initial Volume: 20.2g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| 4,4´-DDE | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| 4,4´-DDT | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| Aldrin | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| alpha-BHC | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| alpha-Chlordane | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| beta-BHC [2C] | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| Chlordane (Total) | ND (0.0220) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| delta-BHC | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| Dieldrin | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| Endosulfan I | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| Endosulfan II | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| Endosulfan Sulfate | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| Endrin | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| Endrin Ketone | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0017) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| gamma-Chlordane | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| Heptachlor | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| Heptachlor Epoxide | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| Hexachlorobenzene | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| Methoxychlor | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |
| Toxaphene | ND (0.138) | | 8081B | | 1 | 05/02/24 19:10 | D4E0033 | DE40209 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *60 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-7
Date Sampled: 04/30/24 10:50
Percent Solids: 90
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/08/24 11:32 | D4E0147 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/08/24 11:32 | D4E0147 | DE40659 |
| 2,4-D | ND (0.051) | | 8151A | | 1 | 05/08/24 11:32 | D4E0147 | DE40659 |
| 2,4-DB | ND (0.051) | | 8151A | | 1 | 05/08/24 11:32 | D4E0147 | DE40659 |
| Dalapon | ND (0.049) | | 8151A | | 1 | 05/08/24 11:32 | D4E0147 | DE40659 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/08/24 11:32 | D4E0147 | DE40659 |
| Dichlorprop | ND (0.051) | | 8151A | | 1 | 05/08/24 11:32 | D4E0147 | DE40659 |
| Dinoseb | ND (0.051) | | 8151A | | 1 | 05/08/24 11:32 | D4E0147 | DE40659 |
| MCPA | ND (2.51) | | 8151A | | 1 | 05/08/24 11:32 | D4E0147 | DE40659 |
| MCPP | ND (2.54) | | 8151A | | 1 | 05/08/24 11:32 | D4E0147 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *92 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-7
Date Sampled: 04/30/24 10:50
Percent Solids: 90
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/1/24 19:02

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **18.8** (11.0) | | 8100M | | 1 | 05/02/24 23:11 | | DE40151 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *77 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-7
Date Sampled: 04/30/24 10:50
Percent Solids: 90

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-05
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 9** (5) | | 9050A | | 1 | EAM | 05/01/24 20:59 | umhos/cm | DE40162 |
| **Corrosivity (pH)** | **6.72** (N/A) | | 9045 | | 1 | EAM | 05/01/24 18:58 | S.U. | DE40148 |
| **Corrosivity (pH) Sample Temp** | **19.9** | | 2550B | | 1 | EAM | 05/01/24 18:58 | °C | DE40148 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 18:30 | °F | DE40156 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 05/01/24 19:53 | ml/5 min | DE40157 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/02/24 20:34 | mg/kg | DE40249 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/02/24 20:34 | mg/kg | DE40249 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-5
Date Sampled: 04/30/24 11:25
Percent Solids: 90

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-06
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.75** (0.83) | | 6010D | | 1 | KJB | 05/03/24 12:43 | 2.66 | 100 | DE40242 |
| **Barium** | **11.7** (0.83) | | 6010D | | 1 | KJB | 05/03/24 12:43 | 2.66 | 100 | DE40242 |
| Cadmium | ND (0.42) | | 6010D | | 1 | KJB | 05/03/24 12:43 | 2.66 | 100 | DE40242 |
| **Chromium** | **8.38** (0.83) | | 6010D | | 1 | KJB | 05/03/24 12:43 | 2.66 | 100 | DE40242 |
| **Lead** | **20.6** (4.17) | | 6010D | | 1 | KJB | 05/03/24 12:43 | 2.66 | 100 | DE40242 |
| **Mercury** | **0.083** (0.033) | | 7471B | | 1 | AFV | 05/02/24 18:17 | 0.67 | 40 | DE40203 |
| Selenium | ND (4.17) | | 6010D | | 1 | KJB | 05/03/24 12:43 | 2.66 | 100 | DE40242 |
| Silver | ND (0.42) | | 6010D | | 1 | KJB | 05/03/24 12:43 | 2.66 | 100 | DE40242 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-5
Date Sampled: 04/30/24 11:25
Percent Solids: 90
Initial Volume: 5.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/5/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,1,1-Trichloroethane | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,1,2,2-Tetrachloroethane | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,1,2-Trichloroethane | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,1-Dichloroethane | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,1-Dichloroethene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,1-Dichloropropene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,2,3-Trichlorobenzene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,2,3-Trichloropropane | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,2,4-Trichlorobenzene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,2,4-Trimethylbenzene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,2-Dibromoethane | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,2-Dichlorobenzene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,2-Dichloroethane | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,2-Dichloropropane | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,3,5-Trimethylbenzene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,3-Dichlorobenzene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,3-Dichloropropane | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,4-Dichlorobenzene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 1,4-Dioxane | ND (0.101) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 2,2-Dichloropropane | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 2-Butanone | ND (0.0504) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 2-Chlorotoluene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 2-Hexanone | ND (0.0504) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 4-Chlorotoluene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 4-Isopropyltoluene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| 4-Methyl-2-Pentanone | ND (0.0504) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Acetone | ND (0.0504) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Benzene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Bromobenzene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-5
Date Sampled: 04/30/24 11:25
Percent Solids: 90
Initial Volume: 5.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/5/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Bromodichloromethane | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Bromoform | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Bromomethane | ND (0.0101) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Carbon Disulfide | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Carbon Tetrachloride | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Chlorobenzene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Chloroethane | ND (0.0101) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Chloroform | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Chloromethane | ND (0.0101) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| cis-1,2-Dichloroethene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| cis-1,3-Dichloropropene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Dibromochloromethane | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Dibromomethane | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Dichlorodifluoromethane | ND (0.0101) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Diethyl Ether | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Di-isopropyl ether | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Ethyl tertiary-butyl ether | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Ethylbenzene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Hexachlorobutadiene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Isopropylbenzene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Methyl tert-Butyl Ether | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Methylene Chloride | ND (0.0252) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Naphthalene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| n-Butylbenzene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| n-Propylbenzene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| sec-Butylbenzene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Styrene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| tert-Butylbenzene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Tertiary-amyl methyl ether | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Tetrachloroethene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-5
Date Sampled: 04/30/24 11:25
Percent Solids: 90
Initial Volume: 5.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/5/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0202) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Toluene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| trans-1,2-Dichloroethene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| trans-1,3-Dichloropropene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Trichloroethene | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Trichlorofluoromethane | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Vinyl Chloride | ND (0.0101) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Xylene O | ND (0.0050) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Xylene P,M | ND (0.0101) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |
| Xylenes (Total) | ND (0.0101) | | 8260D Low | | 1 | MEK | 05/05/24 19:11 | D4E0086 | DE40501 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *100 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *100 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *99 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-5
Date Sampled: 04/30/24 11:25
Percent Solids: 90
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 1,2,4-Trichlorobenzene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 1,2-Dichlorobenzene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 1,3-Dichlorobenzene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 1,4-Dichlorobenzene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 2,4,5-Trichlorophenol | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 2,4,6-Trichlorophenol | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 2,4-Dichlorophenol | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 2,4-Dimethylphenol | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 2,4-Dinitrophenol | ND (1.10) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 2,4-Dinitrotoluene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 2,6-Dinitrotoluene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 2-Chloronaphthalene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 2-Chlorophenol | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 2-Methylnaphthalene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 2-Methylphenol | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 2-Nitrophenol | ND (0.549) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 3,3´-Dichlorobenzidine | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 3+4-Methylphenol | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 4-Bromophenyl-phenylether | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 4-Chloroaniline | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| 4-Nitrophenol | ND (1.10) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Acenaphthene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Acenaphthylene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Acetophenone | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Aniline | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Anthracene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Azobenzene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| **Benzo(a)anthracene** | **0.283** (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| **Benzo(a)pyrene** | **0.303** (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| **Benzo(b)fluoranthene** | **0.291** (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-5
Date Sampled: 04/30/24 11:25
Percent Solids: 90
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Benzo(k)fluoranthene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| bis(2-Chloroethoxy)methane | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| bis(2-Chloroethyl)ether | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| bis(2-chloroisopropyl)Ether | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| bis(2-Ethylhexyl)phthalate | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Butylbenzylphthalate | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| **Chrysene** | **0.305** (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Dibenzo(a,h)Anthracene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Dibenzofuran | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Diethylphthalate | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Dimethylphthalate | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Di-n-butylphthalate | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Di-n-octylphthalate | ND (0.549) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| **Fluoranthene** | **0.503** (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Fluorene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Hexachlorobenzene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Hexachlorobutadiene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Hexachloroethane | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Indeno(1,2,3-cd)Pyrene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Isophorone | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Naphthalene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Nitrobenzene | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| N-Nitrosodimethylamine | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Pentachlorophenol | ND (1.10) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| **Phenanthrene** | **0.290** (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Phenol | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| **Pyrene** | **0.508** (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |
| Pyridine | ND (0.275) | | 8270E | | 1 | TJ | 05/03/24 1:58 | D4E0047 | DE40104 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *85 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-5
Date Sampled: 04/30/24 11:25
Percent Solids: 90
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *156 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *82 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *90 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *80 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *79 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *79 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *124 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-5
Date Sampled: 04/30/24 11:25
Percent Solids: 90
Initial Volume: 20.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/6/24 11:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:50 | | DE40619 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:50 | | DE40619 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:50 | | DE40619 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:50 | | DE40619 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:50 | | DE40619 |
| **Aroclor 1254 [2C]** | **0.07** (0.05) | | 8082A | | 1 | 05/07/24 21:50 | | DE40619 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:50 | | DE40619 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:50 | | DE40619 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/07/24 21:50 | | DE40619 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-5
Date Sampled: 04/30/24 11:25
Percent Solids: 90
Initial Volume: 19.7g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| 4,4´-DDE | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| 4,4´-DDT | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| Aldrin | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| alpha-BHC | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| alpha-Chlordane | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| beta-BHC | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| Chlordane (Total) | ND (0.0225) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| delta-BHC | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| Dieldrin | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| Endosulfan I | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| Endosulfan II | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| Endosulfan Sulfate | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| Endrin | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| Endrin Ketone | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0017) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| gamma-Chlordane | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| Heptachlor | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| Heptachlor Epoxide | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| Hexachlorobenzene | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| Methoxychlor | ND (0.0028) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |
| Toxaphene | ND (0.141) | | 8081B | | 1 | 05/02/24 19:38 | D4E0033 | DE40209 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *69 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-5
Date Sampled: 04/30/24 11:25
Percent Solids: 90
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/08/24 12:01 | D4E0147 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/08/24 12:01 | D4E0147 | DE40659 |
| 2,4-D | ND (0.052) | | 8151A | | 1 | 05/08/24 12:01 | D4E0147 | DE40659 |
| 2,4-DB | ND (0.052) | | 8151A | | 1 | 05/08/24 12:01 | D4E0147 | DE40659 |
| Dalapon | ND (0.050) | | 8151A | | 1 | 05/08/24 12:01 | D4E0147 | DE40659 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/08/24 12:01 | D4E0147 | DE40659 |
| Dichlorprop | ND (0.052) | | 8151A | | 1 | 05/08/24 12:01 | D4E0147 | DE40659 |
| Dinoseb | ND (0.052) | | 8151A | | 1 | 05/08/24 12:01 | D4E0147 | DE40659 |
| MCPA | ND (2.55) | | 8151A | | 1 | 05/08/24 12:01 | D4E0147 | DE40659 |
| MCPP | ND (2.58) | | 8151A | | 1 | 05/08/24 12:01 | D4E0147 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-5
Date Sampled: 04/30/24 11:25
Percent Solids: 90
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/1/24 19:02

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **16.4** (11.5) | | 8100M | | 1 | 05/02/24 23:51 | | DE40151 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *75 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-5
Date Sampled: 04/30/24 11:25
Percent Solids: 90

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-06
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 49** (5) | | 9050A | | 1 | EAM | 05/01/24 20:59 | umhos/cm | DE40162 |
| **Corrosivity (pH)** | **7.70** (N/A) | | 9045 | | 1 | EAM | 05/01/24 18:58 | S.U. | DE40148 |
| **Corrosivity (pH) Sample Temp** | **20.0** | | 2550B | | 1 | EAM | 05/01/24 18:58 | °C | DE40148 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 18:30 | °F | DE40156 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 05/01/24 19:53 | ml/5 min | DE40157 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/02/24 20:34 | mg/kg | DE40249 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/02/24 20:34 | mg/kg | DE40249 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-3
Date Sampled: 04/30/24 11:55
Percent Solids: 91

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-07
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.84** (0.89) | | 6010D | | 1 | KJB | 05/03/24 12:45 | 2.48 | 100 | DE40242 |
| **Barium** | **20.7** (0.89) | | 6010D | | 1 | KJB | 05/03/24 12:45 | 2.48 | 100 | DE40242 |
| Cadmium | ND (0.44) | | 6010D | | 1 | KJB | 05/03/24 12:45 | 2.48 | 100 | DE40242 |
| **Chromium** | **10.1** (0.89) | | 6010D | | 1 | KJB | 05/03/24 12:45 | 2.48 | 100 | DE40242 |
| **Lead** | **39.3** (4.43) | | 6010D | | 1 | KJB | 05/03/24 12:45 | 2.48 | 100 | DE40242 |
| **Mercury** | **0.125** (0.032) | | 7471B | | 1 | AFV | 05/02/24 18:19 | 0.68 | 40 | DE40203 |
| Selenium | ND (4.43) | | 6010D | | 1 | KJB | 05/03/24 12:45 | 2.48 | 100 | DE40242 |
| Silver | ND (0.44) | | 6010D | | 1 | KJB | 05/03/24 12:45 | 2.48 | 100 | DE40242 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-3
Date Sampled: 04/30/24 11:55
Percent Solids: 91
Initial Volume: 5.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/5/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,1,1-Trichloroethane | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,1,2,2-Tetrachloroethane | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,1,2-Trichloroethane | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,1-Dichloroethane | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,1-Dichloroethene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,1-Dichloropropene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,2,3-Trichlorobenzene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,2,3-Trichloropropane | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,2,4-Trichlorobenzene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,2,4-Trimethylbenzene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,2-Dibromoethane | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,2-Dichlorobenzene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,2-Dichloroethane | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,2-Dichloropropane | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,3,5-Trimethylbenzene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,3-Dichlorobenzene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,3-Dichloropropane | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,4-Dichlorobenzene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 1,4-Dioxane | ND (0.0981) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 2,2-Dichloropropane | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 2-Butanone | ND (0.0491) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 2-Chlorotoluene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 2-Hexanone | ND (0.0491) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 4-Chlorotoluene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 4-Isopropyltoluene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| 4-Methyl-2-Pentanone | ND (0.0491) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Acetone | ND (0.0491) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Benzene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Bromobenzene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-3
Date Sampled: 04/30/24 11:55
Percent Solids: 91
Initial Volume: 5.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/5/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Bromodichloromethane | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Bromoform | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Bromomethane | ND (0.0098) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Carbon Disulfide | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Carbon Tetrachloride | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Chlorobenzene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Chloroethane | ND (0.0098) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Chloroform | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Chloromethane | ND (0.0098) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| cis-1,2-Dichloroethene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| cis-1,3-Dichloropropene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Dibromochloromethane | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Dibromomethane | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Dichlorodifluoromethane | ND (0.0098) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Diethyl Ether | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Di-isopropyl ether | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Ethyl tertiary-butyl ether | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Ethylbenzene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Hexachlorobutadiene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Isopropylbenzene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Methyl tert-Butyl Ether | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Methylene Chloride | ND (0.0245) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Naphthalene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| n-Butylbenzene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| n-Propylbenzene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| sec-Butylbenzene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Styrene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| tert-Butylbenzene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Tertiary-amyl methyl ether | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Tetrachloroethene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-3
Date Sampled: 04/30/24 11:55
Percent Solids: 91
Initial Volume: 5.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/5/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0196) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Toluene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| trans-1,2-Dichloroethene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| trans-1,3-Dichloropropene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Trichloroethene | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Trichlorofluoromethane | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Vinyl Chloride | ND (0.0098) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Xylene O | ND (0.0049) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Xylene P,M | ND (0.0098) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |
| Xylenes (Total) | ND (0.0098) | | 8260D Low | | 1 | MEK | 05/05/24 19:36 | D4E0086 | DE40501 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *104 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *100 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *100 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-3
Date Sampled: 04/30/24 11:55
Percent Solids: 91
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.029) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 1,2,4-Trichlorobenzene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 1,2-Dichlorobenzene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 1,3-Dichlorobenzene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 1,4-Dichlorobenzene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 2,4,5-Trichlorophenol | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 2,4,6-Trichlorophenol | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 2,4-Dichlorophenol | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 2,4-Dimethylphenol | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 2,4-Dinitrophenol | ND (1.15) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 2,4-Dinitrotoluene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 2,6-Dinitrotoluene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 2-Chloronaphthalene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 2-Chlorophenol | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 2-Methylnaphthalene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 2-Methylphenol | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 2-Nitrophenol | ND (0.575) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 3,3´-Dichlorobenzidine | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 3+4-Methylphenol | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 4-Bromophenyl-phenylether | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 4-Chloroaniline | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| 4-Nitrophenol | ND (1.15) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Acenaphthene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Acenaphthylene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Acetophenone | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Aniline | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Anthracene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Azobenzene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| **Benzo(a)anthracene** | **0.322** (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| **Benzo(a)pyrene** | **0.324** (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| **Benzo(b)fluoranthene** | **0.349** (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-3
Date Sampled: 04/30/24 11:55
Percent Solids: 91
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(g,h,i)perylene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Benzo(k)fluoranthene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| bis(2-Chloroethoxy)methane | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| bis(2-Chloroethyl)ether | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| bis(2-chloroisopropyl)Ether | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| bis(2-Ethylhexyl)phthalate | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Butylbenzylphthalate | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| **Chrysene** | **0.338** (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Dibenzo(a,h)Anthracene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Dibenzofuran | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Diethylphthalate | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Dimethylphthalate | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Di-n-butylphthalate | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Di-n-octylphthalate | ND (0.575) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| **Fluoranthene** | **0.602** (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Fluorene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Hexachlorobenzene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Hexachlorobutadiene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Hexachloroethane | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Indeno(1,2,3-cd)Pyrene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Isophorone | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Naphthalene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Nitrobenzene | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| N-Nitrosodimethylamine | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Pentachlorophenol | ND (1.15) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| **Phenanthrene** | **0.339** (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Phenol | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| **Pyrene** | **0.544** (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |
| Pyridine | ND (0.288) | | 8270E | | 1 | TJ | 05/03/24 2:28 | D4E0047 | DE40104 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *93 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-3
Date Sampled: 04/30/24 11:55
Percent Solids: 91
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *154 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *94 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *97 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *88 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *86 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *89 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *119 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-3
Date Sampled: 04/30/24 11:55
Percent Solids: 91
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/6/24 11:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | | 8082A | | 1 | 05/07/24 22:10 | | DE40619 |
| Aroclor 1221 | ND (0.06) | | 8082A | | 1 | 05/07/24 22:10 | | DE40619 |
| Aroclor 1232 | ND (0.06) | | 8082A | | 1 | 05/07/24 22:10 | | DE40619 |
| Aroclor 1242 | ND (0.06) | | 8082A | | 1 | 05/07/24 22:10 | | DE40619 |
| Aroclor 1248 | ND (0.06) | | 8082A | | 1 | 05/07/24 22:10 | | DE40619 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | | 8082A | | 1 | 05/07/24 22:10 | | DE40619 |
| Aroclor 1260 | ND (0.06) | | 8082A | | 1 | 05/07/24 22:10 | | DE40619 |
| Aroclor 1262 | ND (0.06) | | 8082A | | 1 | 05/07/24 22:10 | | DE40619 |
| Aroclor 1268 | ND (0.06) | | 8082A | | 1 | 05/07/24 22:10 | | DE40619 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-3
Date Sampled: 04/30/24 11:55
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| 4,4´-DDE | ND (0.0027) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| 4,4´-DDT | ND (0.0027) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| Aldrin | ND (0.0027) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| alpha-BHC | ND (0.0027) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| alpha-Chlordane | ND (0.0027) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| beta-BHC | ND (0.0027) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| Chlordane (Total) | ND (0.0214) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| delta-BHC | ND (0.0027) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| Dieldrin | ND (0.0027) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| Endosulfan I | ND (0.0027) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| Endosulfan II | ND (0.0027) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| Endosulfan Sulfate | ND (0.0027) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| Endrin | ND (0.0027) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| Endrin Ketone | ND (0.0027) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0016) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| gamma-Chlordane | ND (0.0027) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| Heptachlor | ND (0.0027) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| Heptachlor Epoxide | ND (0.0027) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| Hexachlorobenzene | ND (0.0027) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| Methoxychlor | ND (0.0027) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |
| Toxaphene | ND (0.134) | | 8081B | | 1 | 05/02/24 20:05 | D4E0033 | DE40209 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *91 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-3
Date Sampled: 04/30/24 11:55
Percent Solids: 91
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/08/24 12:29 | D4E0147 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/08/24 12:29 | D4E0147 | DE40659 |
| 2,4-D | ND (0.051) | | 8151A | | 1 | 05/08/24 12:29 | D4E0147 | DE40659 |
| 2,4-DB | ND (0.052) | | 8151A | | 1 | 05/08/24 12:29 | D4E0147 | DE40659 |
| Dalapon | ND (0.049) | | 8151A | | 1 | 05/08/24 12:29 | D4E0147 | DE40659 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/08/24 12:29 | D4E0147 | DE40659 |
| Dichlorprop | ND (0.051) | | 8151A | | 1 | 05/08/24 12:29 | D4E0147 | DE40659 |
| Dinoseb | ND (0.052) | | 8151A | | 1 | 05/08/24 12:29 | D4E0147 | DE40659 |
| MCPA | ND (2.53) | | 8151A | | 1 | 05/08/24 12:29 | D4E0147 | DE40659 |
| MCPP | ND (2.56) | | 8151A | | 1 | 05/08/24 12:29 | D4E0147 | DE40659 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *86 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-3
Date Sampled: 04/30/24 11:55
Percent Solids: 91
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/1/24 19:02

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **21.9** (11.4) | | 8100M | | 1 | 05/03/24 0:30 | | DE40151 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *80 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-3
Date Sampled: 04/30/24 11:55
Percent Solids: 91

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-07
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 89** (5) | | 9050A | | 1 | EAM | 05/01/24 20:59 | umhos/cm | DE40162 |
| **Corrosivity (pH)** | **8.31** (N/A) | | 9045 | | 1 | EAM | 05/01/24 18:58 | S.U. | DE40148 |
| **Corrosivity (pH) Sample Temp** | **19.8** | | 2550B | | 1 | EAM | 05/01/24 18:58 | °C | DE40148 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 18:30 | °F | DE40156 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 05/01/24 20:03 | ml/5 min | DE40157 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/02/24 20:34 | mg/kg | DE40249 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/02/24 20:34 | mg/kg | DE40249 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-1
Date Sampled: 04/30/24 12:10
Percent Solids: 90

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-08
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.36** (0.78) | | 6010D | | 1 | KJB | 05/03/24 12:48 | 2.84 | 100 | DE40242 |
| **Barium** | **17.5** (0.78) | | 6010D | | 1 | KJB | 05/03/24 12:48 | 2.84 | 100 | DE40242 |
| Cadmium | ND (0.39) | | 6010D | | 1 | KJB | 05/03/24 12:48 | 2.84 | 100 | DE40242 |
| **Chromium** | **10.6** (0.78) | | 6010D | | 1 | KJB | 05/03/24 12:48 | 2.84 | 100 | DE40242 |
| **Lead** | **34.0** (3.92) | | 6010D | | 1 | KJB | 05/03/24 12:48 | 2.84 | 100 | DE40242 |
| **Mercury** | **0.081** (0.035) | | 7471B | | 1 | AFV | 05/02/24 18:21 | 0.63 | 40 | DE40203 |
| Selenium | ND (3.92) | | 6010D | | 1 | KJB | 05/03/24 12:48 | 2.84 | 100 | DE40242 |
| Silver | ND (0.39) | | 6010D | | 1 | KJB | 05/03/24 12:48 | 2.84 | 100 | DE40242 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-1
Date Sampled: 04/30/24 12:10
Percent Solids: 90
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/5/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,1,1-Trichloroethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,1,2,2-Tetrachloroethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,1,2-Trichloroethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,1-Dichloroethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,1-Dichloroethene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,1-Dichloropropene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,2,3-Trichlorobenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,2,3-Trichloropropane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,2,4-Trichlorobenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,2,4-Trimethylbenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,2-Dibromoethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,2-Dichlorobenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,2-Dichloroethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,2-Dichloropropane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,3,5-Trimethylbenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,3-Dichlorobenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,3-Dichloropropane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,4-Dichlorobenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 1,4-Dioxane | ND (0.111) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 2,2-Dichloropropane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 2-Butanone | ND (0.0557) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 2-Chlorotoluene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 2-Hexanone | ND (0.0557) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 4-Chlorotoluene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 4-Isopropyltoluene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| 4-Methyl-2-Pentanone | ND (0.0557) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Acetone | ND (0.0557) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Benzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Bromobenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-1
Date Sampled: 04/30/24 12:10
Percent Solids: 90
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/5/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Bromodichloromethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Bromoform | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Bromomethane | ND (0.0111) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Carbon Disulfide | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Carbon Tetrachloride | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Chlorobenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Chloroethane | ND (0.0111) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Chloroform | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Chloromethane | ND (0.0111) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| cis-1,2-Dichloroethene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| cis-1,3-Dichloropropene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Dibromochloromethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Dibromomethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Dichlorodifluoromethane | ND (0.0111) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Diethyl Ether | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Di-isopropyl ether | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Ethyl tertiary-butyl ether | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Ethylbenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Hexachlorobutadiene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Isopropylbenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Methyl tert-Butyl Ether | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Methylene Chloride | ND (0.0278) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Naphthalene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| n-Butylbenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| n-Propylbenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| sec-Butylbenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Styrene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| tert-Butylbenzene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Tertiary-amyl methyl ether | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Tetrachloroethene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-1
Date Sampled: 04/30/24 12:10
Percent Solids: 90
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/5/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0223) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Toluene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| trans-1,2-Dichloroethene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| trans-1,3-Dichloropropene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Trichloroethene | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Trichlorofluoromethane | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Vinyl Chloride | ND (0.0111) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Xylene O | ND (0.0056) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Xylene P,M | ND (0.0111) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |
| Xylenes (Total) | ND (0.0111) | | 8260D Low | | 1 | MEK | 05/05/24 20:02 | D4E0086 | DE40501 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *106 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *98 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *101 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-1
Date Sampled: 04/30/24 12:10
Percent Solids: 90
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 1,2,4-Trichlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 1,2-Dichlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 1,3-Dichlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 1,4-Dichlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 2,4,5-Trichlorophenol | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 2,4,6-Trichlorophenol | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 2,4-Dichlorophenol | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 2,4-Dimethylphenol | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 2,4-Dinitrophenol | ND (1.11) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 2,4-Dinitrotoluene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 2,6-Dinitrotoluene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 2-Chloronaphthalene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 2-Chlorophenol | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 2-Methylnaphthalene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 2-Methylphenol | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 2-Nitrophenol | ND (0.557) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 3,3´-Dichlorobenzidine | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 3+4-Methylphenol | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 4-Bromophenyl-phenylether | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 4-Chloroaniline | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| 4-Nitrophenol | ND (1.11) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Acenaphthene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Acenaphthylene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Acetophenone | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Aniline | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Anthracene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Azobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| **Benzo(a)anthracene** | **0.454** (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| **Benzo(a)pyrene** | **0.492** (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| **Benzo(b)fluoranthene** | **0.518** (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-1
Date Sampled: 04/30/24 12:10
Percent Solids: 90
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Benzo(g,h,i)perylene** | **0.363** (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Benzo(k)fluoranthene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| bis(2-Chloroethoxy)methane | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| bis(2-Chloroethyl)ether | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| bis(2-chloroisopropyl)Ether | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| bis(2-Ethylhexyl)phthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Butylbenzylphthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| **Chrysene** | **0.435** (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Dibenzo(a,h)Anthracene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Dibenzofuran | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Diethylphthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Dimethylphthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Di-n-butylphthalate | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Di-n-octylphthalate | ND (0.557) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| **Fluoranthene** | **0.874** (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Fluorene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Hexachlorobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Hexachlorobutadiene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Hexachloroethane | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| **Indeno(1,2,3-cd)Pyrene** | **0.353** (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Isophorone | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Naphthalene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Nitrobenzene | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| N-Nitrosodimethylamine | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Pentachlorophenol | ND (1.11) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| **Phenanthrene** | **0.468** (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Phenol | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| **Pyrene** | **0.739** (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |
| Pyridine | ND (0.278) | | 8270E | | 1 | TJ | 05/03/24 2:59 | D4E0047 | DE40104 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *83 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-1
Date Sampled: 04/30/24 12:10
Percent Solids: 90
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *139 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *82 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *90 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *82 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *78 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *80 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *112 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-1
Date Sampled: 04/30/24 12:10
Percent Solids: 90
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/6/24 11:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/07/24 22:30 | | DE40619 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/07/24 22:30 | | DE40619 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/07/24 22:30 | | DE40619 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/07/24 22:30 | | DE40619 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/07/24 22:30 | | DE40619 |
| **Aroclor 1254 [2C]** | **0.6** (0.05) | | 8082A | | 1 | 05/07/24 22:30 | | DE40619 |
| **Aroclor 1260** | **P, LC 0.1** (0.05) | | 8082A | | 1 | 05/07/24 22:30 | | DE40619 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/07/24 22:30 | | DE40619 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/07/24 22:30 | | DE40619 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-1
Date Sampled: 04/30/24 12:10
Percent Solids: 90
Initial Volume: 19.3g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0029) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| 4,4´-DDE | ND (0.0029) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| 4,4´-DDT | ND (0.0029) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| Aldrin | ND (0.0029) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| alpha-BHC | ND (0.0029) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| alpha-Chlordane | ND (0.0029) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| beta-BHC | ND (0.0029) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| Chlordane (Total) | ND (0.0231) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| delta-BHC | ND (0.0029) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| Dieldrin | ND (0.0029) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| Endosulfan I | ND (0.0029) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| Endosulfan II | ND (0.0029) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| Endosulfan Sulfate | ND (0.0029) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| Endrin | ND (0.0029) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| Endrin Ketone | ND (0.0029) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0017) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| gamma-Chlordane | ND (0.0029) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| Heptachlor | ND (0.0029) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| Heptachlor Epoxide | ND (0.0029) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| Hexachlorobenzene | ND (0.0029) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| Methoxychlor | ND (0.0029) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |
| Toxaphene | ND (0.144) | | 8081B | | 1 | 05/02/24 20:33 | D4E0033 | DE40209 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *91 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-1
Date Sampled: 04/30/24 12:10
Percent Solids: 90
Initial Volume: 10.4g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/08/24 12:58 | D4E0147 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/08/24 12:58 | D4E0147 | DE40659 |
| 2,4-D | ND (0.050) | | 8151A | | 1 | 05/08/24 12:58 | D4E0147 | DE40659 |
| 2,4-DB | ND (0.051) | | 8151A | | 1 | 05/08/24 12:58 | D4E0147 | DE40659 |
| Dalapon | ND (0.049) | | 8151A | | 1 | 05/08/24 12:58 | D4E0147 | DE40659 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/08/24 12:58 | D4E0147 | DE40659 |
| Dichlorprop | ND (0.050) | | 8151A | | 1 | 05/08/24 12:58 | D4E0147 | DE40659 |
| Dinoseb | ND (0.051) | | 8151A | | 1 | 05/08/24 12:58 | D4E0147 | DE40659 |
| MCPA | ND (2.49) | | 8151A | | 1 | 05/08/24 12:58 | D4E0147 | DE40659 |
| MCPP | ND (2.52) | | 8151A | | 1 | 05/08/24 12:58 | D4E0147 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-1
Date Sampled: 04/30/24 12:10
Percent Solids: 90
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 16:38

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **42.5** (22.4) | | 8100M | | 2 | 05/07/24 16:21 | | DE40661 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *85 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-1
Date Sampled: 04/30/24 12:10
Percent Solids: 90

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-08
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 255** (5) | | 9050A | | 1 | EAM | 05/01/24 20:59 | umhos/cm | DE40162 |
| **Corrosivity (pH)** | **7.79** (N/A) | | 9045 | | 1 | EAM | 05/01/24 18:58 | S.U. | DE40148 |
| **Corrosivity (pH) Sample Temp** | **20.0** | | 2550B | | 1 | EAM | 05/01/24 18:58 | °C | DE40148 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 18:30 | °F | DE40156 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 05/01/24 20:03 | ml/5 min | DE40157 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/02/24 20:34 | mg/kg | DE40249 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/02/24 20:34 | mg/kg | DE40249 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-8.5
Date Sampled: 04/30/24 14:30
Percent Solids: 92

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-09
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **3.20** (0.80) | | 6010D | | 1 | KJB | 05/03/24 12:50 | 2.7 | 100 | DE40242 |
| **Barium** | **21.8** (0.80) | | 6010D | | 1 | KJB | 05/03/24 12:50 | 2.7 | 100 | DE40242 |
| Cadmium | ND (0.40) | | 6010D | | 1 | KJB | 05/03/24 12:50 | 2.7 | 100 | DE40242 |
| **Chromium** | **5.85** (0.80) | | 6010D | | 1 | KJB | 05/03/24 12:50 | 2.7 | 100 | DE40242 |
| **Lead** | **125** (4.02) | | 6010D | | 1 | KJB | 05/03/24 12:50 | 2.7 | 100 | DE40242 |
| **Mercury** | **0.196** (0.032) | | 7471B | | 1 | AFV | 05/02/24 18:23 | 0.68 | 40 | DE40203 |
| Selenium | ND (4.02) | | 6010D | | 1 | KJB | 05/03/24 12:50 | 2.7 | 100 | DE40242 |
| Silver | ND (0.40) | | 6010D | | 1 | KJB | 05/03/24 12:50 | 2.7 | 100 | DE40242 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-8.5
Date Sampled: 04/30/24 14:30
Percent Solids: 92

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-09
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **1.90** (0.05) | | 1311/6010D | | 1 | KJB | 05/08/24 20:27 | 50 | 50 | DE40837 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-8.5
Date Sampled: 04/30/24 14:30
Percent Solids: 92
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/5/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,1,1-Trichloroethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,1,2,2-Tetrachloroethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,1,2-Trichloroethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,1-Dichloroethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,1-Dichloroethene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,1-Dichloropropene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,2,3-Trichlorobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,2,3-Trichloropropane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,2,4-Trichlorobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,2,4-Trimethylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,2-Dibromoethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,2-Dichlorobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,2-Dichloroethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,2-Dichloropropane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,3,5-Trimethylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,3-Dichlorobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,3-Dichloropropane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,4-Dichlorobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 1,4-Dioxane | ND (0.0919) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 2,2-Dichloropropane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 2-Butanone | ND (0.0459) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 2-Chlorotoluene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 2-Hexanone | ND (0.0459) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 4-Chlorotoluene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 4-Isopropyltoluene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| 4-Methyl-2-Pentanone | ND (0.0459) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Acetone | ND (0.0459) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Benzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Bromobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-8.5
Date Sampled: 04/30/24 14:30
Percent Solids: 92
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/5/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Bromochloromethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Bromodichloromethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Bromoform | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Bromomethane | ND (0.0092) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Carbon Disulfide | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Carbon Tetrachloride | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Chlorobenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Chloroethane | ND (0.0092) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Chloroform | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Chloromethane | ND (0.0092) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| cis-1,2-Dichloroethene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| cis-1,3-Dichloropropene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Dibromochloromethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Dibromomethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Dichlorodifluoromethane | ND (0.0092) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Diethyl Ether | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Di-isopropyl ether | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Ethyl tertiary-butyl ether | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Ethylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Hexachlorobutadiene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Isopropylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Methyl tert-Butyl Ether | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Methylene Chloride | ND (0.0230) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Naphthalene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| n-Butylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| n-Propylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| sec-Butylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Styrene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| tert-Butylbenzene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Tertiary-amyl methyl ether | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Tetrachloroethene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-8.5
Date Sampled: 04/30/24 14:30
Percent Solids: 92
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/5/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | ND (0.0184) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Toluene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| trans-1,2-Dichloroethene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| trans-1,3-Dichloropropene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Trichloroethene | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Trichlorofluoromethane | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Vinyl Chloride | ND (0.0092) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Xylene O | ND (0.0046) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Xylene P,M | ND (0.0092) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |
| Xylenes (Total) | ND (0.0092) | | 8260D Low | | 1 | MEK | 05/05/24 20:27 | D4E0086 | DE40501 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *104 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *98 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *101 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-8.5
Date Sampled: 04/30/24 14:30
Percent Solids: 92
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 1,2,4-Trichlorobenzene | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 1,2-Dichlorobenzene | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 1,3-Dichlorobenzene | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 1,4-Dichlorobenzene | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 2,4,5-Trichlorophenol | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 2,4,6-Trichlorophenol | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 2,4-Dichlorophenol | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 2,4-Dimethylphenol | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 2,4-Dinitrophenol | ND (1.10) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 2,4-Dinitrotoluene | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 2,6-Dinitrotoluene | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 2-Chloronaphthalene | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 2-Chlorophenol | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 2-Methylnaphthalene | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 2-Methylphenol | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 2-Nitrophenol | ND (0.548) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 3,3´-Dichlorobenzidine | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 3+4-Methylphenol | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 4-Bromophenyl-phenylether | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 4-Chloroaniline | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| 4-Nitrophenol | ND (1.10) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Acenaphthene | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| **Acenaphthylene** | **0.479** (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Acetophenone | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Aniline | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| **Anthracene** | **0.674** (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Azobenzene | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| **Benzo(a)anthracene** | **2.38** (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| **Benzo(a)pyrene** | **2.33** (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| **Benzo(b)fluoranthene** | **2.53** (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-8.5
Date Sampled: 04/30/24 14:30
Percent Solids: 92
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Benzo(g,h,i)perylene** | **1.52** (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| **Benzo(k)fluoranthene** | **0.967** (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| bis(2-Chloroethoxy)methane | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| bis(2-Chloroethyl)ether | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| bis(2-chloroisopropyl)Ether | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| bis(2-Ethylhexyl)phthalate | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Butylbenzylphthalate | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| **Chrysene** | **2.27** (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| **Dibenzo(a,h)Anthracene** | **0.352** (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Dibenzofuran | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Diethylphthalate | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Dimethylphthalate | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Di-n-butylphthalate | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Di-n-octylphthalate | ND (0.548) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| **Fluoranthene** | **5.39** (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Fluorene | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Hexachlorobenzene | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Hexachlorobutadiene | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Hexachloroethane | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| **Indeno(1,2,3-cd)Pyrene** | **1.46** (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Isophorone | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Naphthalene | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Nitrobenzene | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| N-Nitrosodimethylamine | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Pentachlorophenol | ND (1.10) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| **Phenanthrene** | **2.83** (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Phenol | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| **Pyrene** | **4.59** (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |
| Pyridine | ND (0.274) | | 8270E | | 1 | TJ | 05/03/24 3:29 | D4E0047 | DE40104 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *80 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-8.5
Date Sampled: 04/30/24 14:30
Percent Solids: 92
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/1/24 17:58

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| *Surrogate: 2,4,6-Tribromophenol* | | *145 %* | *S+* | *30-130* | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | | *81 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | | *86 %* | | *30-130* | | | | | |
| *Surrogate: 2-Fluorophenol* | | *75 %* | | *30-130* | | | | | |
| *Surrogate: Nitrobenzene-d5* | | *74 %* | | *30-130* | | | | | |
| *Surrogate: Phenol-d6* | | *77 %* | | *30-130* | | | | | |
| *Surrogate: p-Terphenyl-d14* | | *117 %* | | *30-130* | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-8.5
Date Sampled: 04/30/24 14:30
Percent Solids: 92
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/6/24 11:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | | 8082A | | 1 | 05/07/24 22:50 | | DE40619 |
| Aroclor 1221 | ND (0.05) | | 8082A | | 1 | 05/07/24 22:50 | | DE40619 |
| Aroclor 1232 | ND (0.05) | | 8082A | | 1 | 05/07/24 22:50 | | DE40619 |
| Aroclor 1242 | ND (0.05) | | 8082A | | 1 | 05/07/24 22:50 | | DE40619 |
| Aroclor 1248 | ND (0.05) | | 8082A | | 1 | 05/07/24 22:50 | | DE40619 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | | 8082A | | 1 | 05/07/24 22:50 | | DE40619 |
| Aroclor 1260 | ND (0.05) | | 8082A | | 1 | 05/07/24 22:50 | | DE40619 |
| Aroclor 1262 | ND (0.05) | | 8082A | | 1 | 05/07/24 22:50 | | DE40619 |
| Aroclor 1268 | ND (0.05) | | 8082A | | 1 | 05/07/24 22:50 | | DE40619 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *72 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-8.5
Date Sampled: 04/30/24 14:30
Percent Solids: 92
Initial Volume: 20.9g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0026) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| 4,4´-DDE | ND (0.0026) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| 4,4´-DDT | ND (0.0026) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| Aldrin | ND (0.0026) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| alpha-BHC | ND (0.0026) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| alpha-Chlordane | ND (0.0026) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| beta-BHC [2C] | ND (0.0026) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| Chlordane (Total) | ND (0.0208) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| delta-BHC | ND (0.0026) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| **Dieldrin** | **0.0033** (0.0026) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| Endosulfan I | ND (0.0026) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| Endosulfan II | ND (0.0026) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| Endosulfan Sulfate | ND (0.0026) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| Endrin | ND (0.0026) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| Endrin Ketone | ND (0.0026) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0016) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| gamma-Chlordane | ND (0.0026) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| Heptachlor | ND (0.0026) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| Heptachlor Epoxide | ND (0.0026) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| Hexachlorobenzene | ND (0.0026) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| Methoxychlor | ND (0.0026) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |
| Toxaphene | ND (0.130) | | 8081B | | 1 | 05/02/24 21:01 | D4E0033 | DE40209 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *66 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-8.5
Date Sampled: 04/30/24 14:30
Percent Solids: 92
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | | 8151A | | 1 | 05/08/24 13:27 | D4E0147 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | | 8151A | | 1 | 05/08/24 13:27 | D4E0147 | DE40659 |
| 2,4-D | ND (0.049) | | 8151A | | 1 | 05/08/24 13:27 | D4E0147 | DE40659 |
| 2,4-DB | ND (0.050) | | 8151A | | 1 | 05/08/24 13:27 | D4E0147 | DE40659 |
| Dalapon | ND (0.048) | | 8151A | | 1 | 05/08/24 13:27 | D4E0147 | DE40659 |
| Dicamba | ND (0.010) | | 8151A | | 1 | 05/08/24 13:27 | D4E0147 | DE40659 |
| Dichlorprop | ND (0.049) | | 8151A | | 1 | 05/08/24 13:27 | D4E0147 | DE40659 |
| Dinoseb | ND (0.050) | | 8151A | | 1 | 05/08/24 13:27 | D4E0147 | DE40659 |
| MCPA | ND (2.45) | | 8151A | | 1 | 05/08/24 13:27 | D4E0147 | DE40659 |
| MCPP | ND (2.47) | | 8151A | | 1 | 05/08/24 13:27 | D4E0147 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *90 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-8.5
Date Sampled: 04/30/24 14:30
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 16:38

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **66.4** (11.1) | | 8100M | | 1 | 05/07/24 14:23 | | DE40661 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *81 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-8.5
Date Sampled: 04/30/24 14:30
Percent Solids: 92

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-09
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 8** (5) | | 9050A | | 1 | EAM | 05/01/24 20:59 | umhos/cm | DE40162 |
| **Corrosivity (pH)** | **6.91** (N/A) | | 9045 | | 1 | EAM | 05/01/24 18:58 | S.U. | DE40148 |
| **Corrosivity (pH) Sample Temp** | **20.1** | | 2550B | | 1 | EAM | 05/01/24 18:58 | °C | DE40148 |
| **Flashpoint** | **> 200** (N/A) | | 1010A | | 1 | CCP | 05/01/24 18:30 | °F | DE40156 |
| Free Liquid | ND (0.3) | | 9095A | | 1 | EAM | 05/01/24 20:03 | ml/5 min | DE40157 |
| Reactive Cyanide | ND (2.0) | | 7.3.3.2 | | 1 | EAM | 05/02/24 20:34 | mg/kg | DE40249 |
| Reactive Sulfide | ND (2.0) | | 7.3.4.1 | | 1 | EAM | 05/02/24 20:34 | mg/kg | DE40249 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-8.5
Date Sampled: 04/30/24 14:30
Percent Solids: 92
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0026
ESS Laboratory Sample ID: 24E0026-09
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/7/24 16:23

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Batch |
|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **19.6** (N/A) | | 1311 | | 1 | RAP | 05/08/24 10:23 | DE40728 |
| **Temperature (Max C)** | **22.1** (N/A) | | 1311 | | 1 | RAP | 05/08/24 10:23 | DE40728 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 ºC.** (N/A) | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DE40203 - 245.1/7470A** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Mercury | ND | 0.031 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Mercury | 24.4 | 2.91 | mg/kg wet | 25.50 | | 96 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Mercury | 23.6 | 3.19 | mg/kg wet | 25.50 | | 93 | 80-120 | 3 | 30 | |
| **Batch DE40242 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Arsenic | ND | 0.93 | mg/kg wet | | | | | | | |
| Barium | ND | 0.93 | mg/kg wet | | | | | | | |
| Cadmium | ND | 0.47 | mg/kg wet | | | | | | | |
| Chromium | ND | 0.93 | mg/kg wet | | | | | | | |
| Lead | ND | 4.67 | mg/kg wet | | | | | | | |
| Selenium | ND | 4.67 | mg/kg wet | | | | | | | |
| Silver | ND | 0.47 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Arsenic | 75.1 | 3.12 | mg/kg wet | 75.60 | | 99 | 80-120 | | | |
| Barium | 395 | 3.12 | mg/kg wet | 372.0 | | 106 | 80-120 | | | |
| Cadmium | 249 | 1.56 | mg/kg wet | 259.0 | | 96 | 80-120 | | | |
| Chromium | 157 | 3.12 | mg/kg wet | 156.0 | | 101 | 80-120 | | | |
| Lead | 219 | 15.6 | mg/kg wet | 225.0 | | 97 | 80-120 | | | |
| Selenium | 78.0 | 15.6 | mg/kg wet | 82.70 | | 94 | 80-120 | | | |
| Silver | 46.2 | 1.56 | mg/kg wet | 51.00 | | 91 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Arsenic | 75.2 | 3.28 | mg/kg wet | 75.60 | | 99 | 80-120 | 0.2 | 30 | |
| Barium | 394 | 3.28 | mg/kg wet | 372.0 | | 106 | 80-120 | 0.3 | 30 | |
| Cadmium | 248 | 1.64 | mg/kg wet | 259.0 | | 96 | 80-120 | 0.3 | 30 | |
| Chromium | 157 | 3.28 | mg/kg wet | 156.0 | | 101 | 80-120 | 0.04 | 30 | |
| Lead | 219 | 16.4 | mg/kg wet | 225.0 | | 98 | 80-120 | 0.1 | 30 | |
| Selenium | 76.8 | 16.4 | mg/kg wet | 82.70 | | 93 | 80-120 | 1 | 30 | |
| Silver | 44.8 | 1.64 | mg/kg wet | 51.00 | | 88 | 80-120 | 3 | 30 | |
| **1311 TCLP Metals** | | | | | | | | | | |
| **Batch DE40837 - 3005A_TCLP** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 0.05 | mg/L | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 0.45 | 0.05 | mg/L | 0.5000 | | 90 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 0.44 | 0.05 | mg/L | 0.5000 | | 88 | 80-120 | 2 | 20 | |
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40324 - 5035** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40324 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dioxane | ND | 0.100 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Acetone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromoform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Carbon Disulfide | ND | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Chloroform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40324 - 5035** | | | | | | | | | | |
| Dibromomethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methylene Chloride | ND | 0.0250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.0050 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 0.0200 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.0100 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.0050 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.0100 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0496* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0485* | | mg/kg wet | *0.05000* | | *97* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0487* | | mg/kg wet | *0.05000* | | *97* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0489* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0497 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,1,1-Trichloroethane | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 0.0434 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 40-160 | | | |
| 1,1,2-Trichloroethane | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| 1,1-Dichloroethane | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| 1,1-Dichloroethene | 0.0502 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,1-Dichloropropene | 0.0484 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 0.0439 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | | | |
| 1,2,3-Trichloropropane | 0.0378 | 0.0050 | mg/kg wet | 0.05000 | | 76 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0463 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0364 | 0.0050 | mg/kg wet | 0.05000 | | 73 | 70-130 | | | |
| 1,2-Dibromoethane | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40324 - 5035** | | | | | | | | | | |
| 1,2-Dichlorobenzene | 0.0431 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 70-130 | | | |
| 1,2-Dichloroethane | 0.0473 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| 1,2-Dichloropropane | 0.0489 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0459 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| 1,3-Dichlorobenzene | 0.0445 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | | | |
| 1,3-Dichloropropane | 0.0484 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| 1,4-Dichlorobenzene | 0.0441 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | | | |
| 1,4-Dioxane | 0.929 | 0.100 | mg/kg wet | 1.000 | | 93 | 70-130 | | | |
| 2,2-Dichloropropane | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 2-Butanone | 0.260 | 0.0500 | mg/kg wet | 0.2500 | | 104 | 40-160 | | | |
| 2-Chlorotoluene | 0.0454 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| 2-Hexanone | 0.240 | 0.0500 | mg/kg wet | 0.2500 | | 96 | 40-160 | | | |
| 4-Chlorotoluene | 0.0448 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| 4-Isopropyltoluene | 0.0438 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 0.227 | 0.0500 | mg/kg wet | 0.2500 | | 91 | 40-160 | | | |
| Acetone | 0.316 | 0.0500 | mg/kg wet | 0.2500 | | 126 | 40-160 | | | |
| Benzene | 0.0484 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| Bromobenzene | 0.0456 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| Bromochloromethane | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| Bromodichloromethane | 0.0568 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | | | |
| Bromoform | 0.0381 | 0.0050 | mg/kg wet | 0.05000 | | 76 | 40-160 | | | |
| Bromomethane | 0.0483 | 0.0100 | mg/kg wet | 0.05000 | | 97 | 40-160 | | | |
| Carbon Disulfide | 0.0534 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| Carbon Tetrachloride | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Chlorobenzene | 0.0489 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Chloroethane | 0.0498 | 0.0100 | mg/kg wet | 0.05000 | | 100 | 40-160 | | | |
| Chloroform | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Chloromethane | 0.0438 | 0.0100 | mg/kg wet | 0.05000 | | 88 | 40-160 | | | |
| cis-1,2-Dichloroethene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| cis-1,3-Dichloropropene | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 40-160 | | | |
| Dibromochloromethane | 0.0462 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 40-160 | | | |
| Dibromomethane | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Dichlorodifluoromethane | 0.0303 | 0.0100 | mg/kg wet | 0.05000 | | 61 | 40-160 | | | |
| Diethyl Ether | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Di-isopropyl ether | 0.0520 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 0.0514 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Ethylbenzene | 0.0492 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Hexachlorobutadiene | 0.0436 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 40-160 | | | |
| Isopropylbenzene | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Methyl tert-Butyl Ether | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| Methylene Chloride | 0.0464 | 0.0250 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |
| Naphthalene | 0.0421 | 0.0050 | mg/kg wet | 0.05000 | | 84 | 40-160 | | | |
| n-Butylbenzene | 0.0455 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| n-Propylbenzene | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| sec-Butylbenzene | 0.0433 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40324 - 5035** | | | | | | | | | | |
| Styrene | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 40-160 | | | |
| tert-Butylbenzene | 0.0452 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| Tertiary-amyl methyl ether | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Tetrachloroethene | 0.0398 | 0.0050 | mg/kg wet | 0.05000 | | 80 | 70-130 | | | |
| Tetrahydrofuran | 0.0467 | 0.0200 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |
| Toluene | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| trans-1,2-Dichloroethene | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| trans-1,3-Dichloropropene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| Trichloroethene | 0.0479 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Trichlorofluoromethane | 0.0478 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 40-160 | | | |
| Vinyl Chloride | 0.0451 | 0.0100 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| Xylene O | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Xylene P,M | 0.103 | 0.0100 | mg/kg wet | 0.1000 | | 103 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0471* | | mg/kg wet | *0.05000* | | *94* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0501* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0486* | | mg/kg wet | *0.05000* | | *97* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0488* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 4 | 20 | |
| 1,1,1-Trichloroethane | 0.0568 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | 11 | 20 | |
| 1,1,2,2-Tetrachloroethane | 0.0497 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 40-160 | 14 | 20 | |
| 1,1,2-Trichloroethane | 0.0517 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 6 | 20 | |
| 1,1-Dichloroethane | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 8 | 20 | |
| 1,1-Dichloroethene | 0.0564 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | 12 | 20 | |
| 1,1-Dichloropropene | 0.0541 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 11 | 20 | |
| 1,2,3-Trichlorobenzene | 0.0483 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 10 | 20 | |
| 1,2,3-Trichloropropane | 0.0439 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | 15 | 20 | |
| 1,2,4-Trichlorobenzene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 9 | 20 | |
| 1,2,4-Trimethylbenzene | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 10 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 0.0450 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | 21 | 20 | D+ |
| 1,2-Dibromoethane | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 8 | 20 | |
| 1,2-Dichlorobenzene | 0.0468 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 8 | 20 | |
| 1,2-Dichloroethane | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 6 | 20 | |
| 1,2-Dichloropropane | 0.0514 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 5 | 20 | |
| 1,3,5-Trimethylbenzene | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 11 | 20 | |
| 1,3-Dichlorobenzene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 9 | 20 | |
| 1,3-Dichloropropane | 0.0514 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 6 | 20 | |
| 1,4-Dichlorobenzene | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 9 | 20 | |
| 1,4-Dioxane | 1.11 | 0.100 | mg/kg wet | 1.000 | | 111 | 70-130 | 18 | 20 | |
| 2,2-Dichloropropane | 0.0568 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | 10 | 20 | |
| 2-Butanone | 0.261 | 0.0500 | mg/kg wet | 0.2500 | | 104 | 40-160 | 0.3 | 20 | |
| 2-Chlorotoluene | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 10 | 20 | |
| 2-Hexanone | 0.261 | 0.0500 | mg/kg wet | 0.2500 | | 105 | 40-160 | 9 | 20 | |
| 4-Chlorotoluene | 0.0497 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 10 | 20 | |
| 4-Isopropyltoluene | 0.0495 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 12 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40324 - 5035** | | | | | | | | | | |
| 4-Methyl-2-Pentanone | 0.265 | 0.0500 | mg/kg wet | 0.2500 | | 106 | 40-160 | 16 | 20 | |
| Acetone | 0.245 | 0.0500 | mg/kg wet | 0.2500 | | 98 | 40-160 | 25 | 20 | D+ |
| Benzene | 0.0524 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 8 | 20 | |
| Bromobenzene | 0.0493 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 8 | 20 | |
| Bromochloromethane | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 6 | 20 | |
| Bromodichloromethane | 0.0597 | 0.0050 | mg/kg wet | 0.05000 | | 119 | 70-130 | 5 | 20 | |
| Bromoform | 0.0408 | 0.0050 | mg/kg wet | 0.05000 | | 82 | 40-160 | 7 | 20 | |
| Bromomethane | 0.0526 | 0.0100 | mg/kg wet | 0.05000 | | 105 | 40-160 | 9 | 20 | |
| Carbon Disulfide | 0.0601 | 0.0050 | mg/kg wet | 0.05000 | | 120 | 70-130 | 12 | 20 | |
| Carbon Tetrachloride | 0.0562 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 11 | 20 | |
| Chlorobenzene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 7 | 20 | |
| Chloroethane | 0.0548 | 0.0100 | mg/kg wet | 0.05000 | | 110 | 40-160 | 9 | 20 | |
| Chloroform | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 7 | 20 | |
| Chloromethane | 0.0485 | 0.0100 | mg/kg wet | 0.05000 | | 97 | 40-160 | 10 | 20 | |
| cis-1,2-Dichloroethene | 0.0538 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 7 | 20 | |
| cis-1,3-Dichloropropene | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 40-160 | 6 | 20 | |
| Dibromochloromethane | 0.0483 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 40-160 | 4 | 20 | |
| Dibromomethane | 0.0529 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 8 | 20 | |
| Dichlorodifluoromethane | 0.0344 | 0.0100 | mg/kg wet | 0.05000 | | 69 | 40-160 | 12 | 20 | |
| Diethyl Ether | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 6 | 20 | |
| Di-isopropyl ether | 0.0544 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 4 | 20 | |
| Ethyl tertiary-butyl ether | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 4 | 20 | |
| Ethylbenzene | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 8 | 20 | |
| Hexachlorobutadiene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 40-160 | 12 | 20 | |
| Isopropylbenzene | 0.0569 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | 12 | 20 | |
| Methyl tert-Butyl Ether | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 6 | 20 | |
| Methylene Chloride | 0.0489 | 0.0250 | mg/kg wet | 0.05000 | | 98 | 70-130 | 5 | 20 | |
| Naphthalene | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 40-160 | 14 | 20 | |
| n-Butylbenzene | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 13 | 20 | |
| n-Propylbenzene | 0.0533 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 13 | 20 | |
| sec-Butylbenzene | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 12 | 20 | |
| Styrene | 0.0522 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 40-160 | 6 | 20 | |
| tert-Butylbenzene | 0.0510 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 12 | 20 | |
| Tertiary-amyl methyl ether | 0.0535 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 5 | 20 | |
| Tetrachloroethene | 0.0401 | 0.0050 | mg/kg wet | 0.05000 | | 80 | 70-130 | 1 | 20 | |
| Tetrahydrofuran | 0.0569 | 0.0200 | mg/kg wet | 0.05000 | | 114 | 70-130 | 20 | 20 | |
| Toluene | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 8 | 20 | |
| trans-1,2-Dichloroethene | 0.0550 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 9 | 20 | |
| trans-1,3-Dichloropropene | 0.0519 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 4 | 20 | |
| Trichloroethene | 0.0529 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 10 | 20 | |
| Trichlorofluoromethane | 0.0540 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 40-160 | 12 | 20 | |
| Vinyl Chloride | 0.0509 | 0.0100 | mg/kg wet | 0.05000 | | 102 | 70-130 | 12 | 20 | |
| Xylene O | 0.0543 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 7 | 20 | |
| Xylene P,M | 0.112 | 0.0100 | mg/kg wet | 0.1000 | | 112 | 70-130 | 8 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0482* | | mg/kg wet | *0.05000* | | *96* | *70-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40324 - 5035** | | | | | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0488* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0489* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0488* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| **Batch DE40501 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dioxane | ND | 0.100 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Acetone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromoform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Carbon Disulfide | ND | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.0100 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40501 - 5035** | | | | | | | | | | |
| Chloroform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromomethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methylene Chloride | ND | 0.0250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.0050 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 0.0200 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.0100 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.0050 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.0100 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0495* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0495* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0486* | | mg/kg wet | *0.05000* | | *97* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0504* | | mg/kg wet | *0.05000* | | *101* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0447 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | | | |
| 1,1,1-Trichloroethane | 0.0460 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 0.0435 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 40-160 | | | |
| 1,1,2-Trichloroethane | 0.0455 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| 1,1-Dichloroethane | 0.0444 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | | | |
| 1,1-Dichloroethene | 0.0459 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| 1,1-Dichloropropene | 0.0445 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 0.0440 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40501 - 5035** | | | | | | | | | | |
| 1,2,3-Trichloropropane | 0.0379 | 0.0050 | mg/kg wet | 0.05000 | | 76 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 0.0462 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0452 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0370 | 0.0050 | mg/kg wet | 0.05000 | | 74 | 70-130 | | | |
| 1,2-Dibromoethane | 0.0437 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 70-130 | | | |
| 1,2-Dichlorobenzene | 0.0428 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 70-130 | | | |
| 1,2-Dichloroethane | 0.0446 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | | | |
| 1,2-Dichloropropane | 0.0456 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0452 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| 1,3-Dichlorobenzene | 0.0434 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 70-130 | | | |
| 1,3-Dichloropropane | 0.0451 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| 1,4-Dichlorobenzene | 0.0441 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | | | |
| 1,4-Dioxane | 0.833 | 0.100 | mg/kg wet | 1.000 | | 83 | 70-130 | | | |
| 2,2-Dichloropropane | 0.0472 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| 2-Butanone | 0.249 | 0.0500 | mg/kg wet | 0.2500 | | 100 | 40-160 | | | |
| 2-Chlorotoluene | 0.0449 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| 2-Hexanone | 0.239 | 0.0500 | mg/kg wet | 0.2500 | | 95 | 40-160 | | | |
| 4-Chlorotoluene | 0.0443 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | | | |
| 4-Isopropyltoluene | 0.0429 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 0.217 | 0.0500 | mg/kg wet | 0.2500 | | 87 | 40-160 | | | |
| Acetone | 0.307 | 0.0500 | mg/kg wet | 0.2500 | | 123 | 40-160 | | | |
| Benzene | 0.0444 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | | | |
| Bromobenzene | 0.0451 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| Bromochloromethane | 0.0452 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| Bromodichloromethane | 0.0525 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| Bromoform | 0.0351 | 0.0050 | mg/kg wet | 0.05000 | | 70 | 40-160 | | | |
| Bromomethane | 0.0453 | 0.0100 | mg/kg wet | 0.05000 | | 91 | 40-160 | | | |
| Carbon Disulfide | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| Carbon Tetrachloride | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| Chlorobenzene | 0.0447 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | | | |
| Chloroethane | 0.0451 | 0.0100 | mg/kg wet | 0.05000 | | 90 | 40-160 | | | |
| Chloroform | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| Chloromethane | 0.0406 | 0.0100 | mg/kg wet | 0.05000 | | 81 | 40-160 | | | |
| cis-1,2-Dichloroethene | 0.0462 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| cis-1,3-Dichloropropene | 0.0480 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 40-160 | | | |
| Dibromochloromethane | 0.0428 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 40-160 | | | |
| Dibromomethane | 0.0451 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| Dichlorodifluoromethane | 0.0286 | 0.0100 | mg/kg wet | 0.05000 | | 57 | 40-160 | | | |
| Diethyl Ether | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| Di-isopropyl ether | 0.0481 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| Ethylbenzene | 0.0445 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | | | |
| Hexachlorobutadiene | 0.0421 | 0.0050 | mg/kg wet | 0.05000 | | 84 | 40-160 | | | |
| Isopropylbenzene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| Methyl tert-Butyl Ether | 0.0454 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40501 - 5035** | | | | | | | | | | |
| Methylene Chloride | 0.0413 | 0.0250 | mg/kg wet | 0.05000 | | 83 | 70-130 | | | |
| Naphthalene | 0.0413 | 0.0050 | mg/kg wet | 0.05000 | | 83 | 40-160 | | | |
| n-Butylbenzene | 0.0446 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | | | |
| n-Propylbenzene | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| sec-Butylbenzene | 0.0423 | 0.0050 | mg/kg wet | 0.05000 | | 85 | 70-130 | | | |
| Styrene | 0.0448 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 40-160 | | | |
| tert-Butylbenzene | 0.0443 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | | | |
| Tertiary-amyl methyl ether | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| Tetrachloroethene | 0.0366 | 0.0050 | mg/kg wet | 0.05000 | | 73 | 70-130 | | | |
| Tetrahydrofuran | 0.0429 | 0.0200 | mg/kg wet | 0.05000 | | 86 | 70-130 | | | |
| Toluene | 0.0454 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| trans-1,2-Dichloroethene | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| trans-1,3-Dichloropropene | 0.0463 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |
| Trichloroethene | 0.0443 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | | | |
| Trichlorofluoromethane | 0.0433 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 40-160 | | | |
| Vinyl Chloride | 0.0412 | 0.0100 | mg/kg wet | 0.05000 | | 82 | 70-130 | | | |
| Xylene O | 0.0464 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |
| Xylene P,M | 0.0935 | 0.0100 | mg/kg wet | 0.1000 | | 94 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0480* | | mg/kg wet | *0.05000* | | *96* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0498* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0489* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0498* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0465 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 4 | 20 | |
| 1,1,1-Trichloroethane | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 2 | 20 | |
| 1,1,2,2-Tetrachloroethane | 0.0438 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 40-160 | 0.6 | 20 | |
| 1,1,2-Trichloroethane | 0.0478 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 5 | 20 | |
| 1,1-Dichloroethane | 0.0454 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | 2 | 20 | |
| 1,1-Dichloroethene | 0.0462 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 0.7 | 20 | |
| 1,1-Dichloropropene | 0.0447 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | 0.4 | 20 | |
| 1,2,3-Trichlorobenzene | 0.0435 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 70-130 | 1 | 20 | |
| 1,2,3-Trichloropropane | 0.0394 | 0.0050 | mg/kg wet | 0.05000 | | 79 | 70-130 | 4 | 20 | |
| 1,2,4-Trichlorobenzene | 0.0452 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | 2 | 20 | |
| 1,2,4-Trimethylbenzene | 0.0438 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | 3 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 0.0389 | 0.0050 | mg/kg wet | 0.05000 | | 78 | 70-130 | 5 | 20 | |
| 1,2-Dibromoethane | 0.0467 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 6 | 20 | |
| 1,2-Dichlorobenzene | 0.0422 | 0.0050 | mg/kg wet | 0.05000 | | 84 | 70-130 | 1 | 20 | |
| 1,2-Dichloroethane | 0.0466 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 4 | 20 | |
| 1,2-Dichloropropane | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 3 | 20 | |
| 1,3,5-Trimethylbenzene | 0.0438 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | 3 | 20 | |
| 1,3-Dichlorobenzene | 0.0432 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 70-130 | 0.5 | 20 | |
| 1,3-Dichloropropane | 0.0484 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 7 | 20 | |
| 1,4-Dichlorobenzene | 0.0429 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 70-130 | 3 | 20 | |
| 1,4-Dioxane | 0.926 | 0.100 | mg/kg wet | 1.000 | | 93 | 70-130 | 11 | 20 | |
| 2,2-Dichloropropane | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 0.3 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40501 - 5035** | | | | | | | | | | |
| 2-Butanone | 0.267 | 0.0500 | mg/kg wet | 0.2500 | | 107 | 40-160 | 7 | 20 | |
| 2-Chlorotoluene | 0.0435 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 70-130 | 3 | 20 | |
| 2-Hexanone | 0.262 | 0.0500 | mg/kg wet | 0.2500 | | 105 | 40-160 | 9 | 20 | |
| 4-Chlorotoluene | 0.0433 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 70-130 | 2 | 20 | |
| 4-Isopropyltoluene | 0.0415 | 0.0050 | mg/kg wet | 0.05000 | | 83 | 70-130 | 3 | 20 | |
| 4-Methyl-2-Pentanone | 0.239 | 0.0500 | mg/kg wet | 0.2500 | | 96 | 40-160 | 10 | 20 | |
| Acetone | 0.346 | 0.0500 | mg/kg wet | 0.2500 | | 138 | 40-160 | 12 | 20 | |
| Benzene | 0.0452 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | 2 | 20 | |
| Bromobenzene | 0.0448 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | 0.7 | 20 | |
| Bromochloromethane | 0.0473 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 5 | 20 | |
| Bromodichloromethane | 0.0544 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 4 | 20 | |
| Bromoform | 0.0381 | 0.0050 | mg/kg wet | 0.05000 | | 76 | 40-160 | 8 | 20 | |
| Bromomethane | 0.0454 | 0.0100 | mg/kg wet | 0.05000 | | 91 | 40-160 | 0.1 | 20 | |
| Carbon Disulfide | 0.0492 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 1 | 20 | |
| Carbon Tetrachloride | 0.0459 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 0.3 | 20 | |
| Chlorobenzene | 0.0463 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 3 | 20 | |
| Chloroethane | 0.0456 | 0.0100 | mg/kg wet | 0.05000 | | 91 | 40-160 | 1 | 20 | |
| Chloroform | 0.0473 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 3 | 20 | |
| Chloromethane | 0.0412 | 0.0100 | mg/kg wet | 0.05000 | | 82 | 40-160 | 1 | 20 | |
| cis-1,2-Dichloroethene | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 3 | 20 | |
| cis-1,3-Dichloropropene | 0.0500 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 40-160 | 4 | 20 | |
| Dibromochloromethane | 0.0455 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 40-160 | 6 | 20 | |
| Dibromomethane | 0.0478 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 6 | 20 | |
| Dichlorodifluoromethane | 0.0275 | 0.0100 | mg/kg wet | 0.05000 | | 55 | 40-160 | 4 | 20 | |
| Diethyl Ether | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 6 | 20 | |
| Di-isopropyl ether | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 4 | 20 | |
| Ethyl tertiary-butyl ether | 0.0496 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 4 | 20 | |
| Ethylbenzene | 0.0460 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 3 | 20 | |
| Hexachlorobutadiene | 0.0415 | 0.0050 | mg/kg wet | 0.05000 | | 83 | 40-160 | 2 | 20 | |
| Isopropylbenzene | 0.0479 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 3 | 20 | |
| Methyl tert-Butyl Ether | 0.0481 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 6 | 20 | |
| Methylene Chloride | 0.0427 | 0.0250 | mg/kg wet | 0.05000 | | 85 | 70-130 | 3 | 20 | |
| Naphthalene | 0.0420 | 0.0050 | mg/kg wet | 0.05000 | | 84 | 40-160 | 2 | 20 | |
| n-Butylbenzene | 0.0431 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 70-130 | 3 | 20 | |
| n-Propylbenzene | 0.0449 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | 2 | 20 | |
| sec-Butylbenzene | 0.0407 | 0.0050 | mg/kg wet | 0.05000 | | 81 | 70-130 | 4 | 20 | |
| Styrene | 0.0466 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 40-160 | 4 | 20 | |
| tert-Butylbenzene | 0.0430 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 70-130 | 3 | 20 | |
| Tertiary-amyl methyl ether | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 6 | 20 | |
| Tetrachloroethene | 0.0450 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | 21 | 20 | D+ |
| Tetrahydrofuran | 0.0490 | 0.0200 | mg/kg wet | 0.05000 | | 98 | 70-130 | 13 | 20 | |
| Toluene | 0.0461 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 2 | 20 | |
| trans-1,2-Dichloroethene | 0.0461 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 0.7 | 20 | |
| trans-1,3-Dichloropropene | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 5 | 20 | |
| Trichloroethene | 0.0450 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | 2 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40501 - 5035** | | | | | | | | | | |
| Trichlorofluoromethane | 0.0438 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 40-160 | 1 | 20 | |
| Vinyl Chloride | 0.0416 | 0.0100 | mg/kg wet | 0.05000 | | 83 | 70-130 | 0.8 | 20 | |
| Xylene O | 0.0478 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 3 | 20 | |
| Xylene P,M | 0.0963 | 0.0100 | mg/kg wet | 0.1000 | | 96 | 70-130 | 3 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0496* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0503* | | mg/kg wet | *0.05000* | | *101* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0496* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0503* | | mg/kg wet | *0.05000* | | *101* | *70-130* | | | |
| **Volatile Organics** | | | | | | | | | | |
| **Batch DE40724 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.200 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.200 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.200 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.200 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | ND | 0.200 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.400 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.200 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.200 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.200 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.200 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 1.00 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.200 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.200 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.200 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.200 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.200 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.200 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.200 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.200 | mg/kg wet | | | | | | | |
| 1,4-Dioxane - Screen | ND | 20.0 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.200 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 1.00 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.200 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 1.00 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | ND | 0.200 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.200 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 1.00 | mg/kg wet | | | | | | | |
| Acetone | ND | 1.00 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.200 | mg/kg wet | | | | | | | |
| Bromobenzene | ND | 0.200 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.200 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.200 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Volatile Organics | | | | | | |
| **Batch DE40724 - 5035** | | | | | | | | | | |
| Bromoform | ND | 0.200 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.200 | mg/kg wet | | | | | | | |
| Carbon Disulfide | ND | 0.200 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.200 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.200 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.200 | mg/kg wet | | | | | | | |
| Chloroform | ND | 0.200 | mg/kg wet | | | | | | | |
| Chloromethane | ND | 0.200 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.200 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.200 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.200 | mg/kg wet | | | | | | | |
| Dibromomethane | ND | 0.200 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | ND | 0.200 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.200 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.200 | mg/kg wet | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.200 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.200 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.200 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.200 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.200 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.200 | mg/kg wet | | | | | | | |
| Methylene Chloride | ND | 0.400 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.200 | mg/kg wet | | | | | | | |
| n-Butylbenzene | ND | 0.200 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.200 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.200 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.200 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.200 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.200 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.200 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 1.00 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.200 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.200 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.200 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.200 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.200 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.200 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.200 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.400 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *5.42* | | mg/kg wet | *5.000* | | *108* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *5.01* | | mg/kg wet | *5.000* | | *100* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *5.17* | | mg/kg wet | *5.000* | | *103* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *4.90* | | mg/kg wet | *5.000* | | *98* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 2.05 | 0.200 | mg/kg wet | 2.000 | | 103 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics** | | | | | | | | | | |
| **Batch DE40724 - 5035** | | | | | | | | | | |
| 1,1,1-Trichloroethane | 2.12 | 0.200 | mg/kg wet | 2.000 | | 106 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 1.75 | 0.200 | mg/kg wet | 2.000 | | 88 | 40-160 | | | |
| 1,1,2-Trichloroethane | 2.03 | 0.200 | mg/kg wet | 2.000 | | 101 | 70-130 | | | |
| 1,1-Dichloroethane | 2.05 | 0.200 | mg/kg wet | 2.000 | | 103 | 70-130 | | | |
| 1,1-Dichloroethene | 2.11 | 0.200 | mg/kg wet | 2.000 | | 105 | 70-130 | | | |
| 1,1-Dichloropropene | 1.92 | 0.400 | mg/kg wet | 2.000 | | 96 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 1.94 | 0.200 | mg/kg wet | 2.000 | | 97 | 70-130 | | | |
| 1,2,3-Trichloropropane | 1.72 | 0.200 | mg/kg wet | 2.000 | | 86 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 1.88 | 0.200 | mg/kg wet | 2.000 | | 94 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 2.03 | 0.200 | mg/kg wet | 2.000 | | 101 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 1.69 | 1.00 | mg/kg wet | 2.000 | | 85 | 70-130 | | | |
| 1,2-Dibromoethane | 1.99 | 0.200 | mg/kg wet | 2.000 | | 100 | 70-130 | | | |
| 1,2-Dichlorobenzene | 1.82 | 0.200 | mg/kg wet | 2.000 | | 91 | 70-130 | | | |
| 1,2-Dichloroethane | 2.05 | 0.200 | mg/kg wet | 2.000 | | 102 | 70-130 | | | |
| 1,2-Dichloropropane | 2.06 | 0.200 | mg/kg wet | 2.000 | | 103 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 2.03 | 0.200 | mg/kg wet | 2.000 | | 102 | 70-130 | | | |
| 1,3-Dichlorobenzene | 1.90 | 0.200 | mg/kg wet | 2.000 | | 95 | 70-130 | | | |
| 1,3-Dichloropropane | 1.98 | 0.200 | mg/kg wet | 2.000 | | 99 | 70-130 | | | |
| 1,4-Dichlorobenzene | 1.85 | 0.200 | mg/kg wet | 2.000 | | 93 | 70-130 | | | |
| 1,4-Dioxane - Screen | 41.7 | 20.0 | mg/kg wet | 40.00 | | 104 | 40-160 | | | |
| 2,2-Dichloropropane | 2.21 | 0.200 | mg/kg wet | 2.000 | | 110 | 70-130 | | | |
| 2-Butanone | 11.2 | 1.00 | mg/kg wet | 10.00 | | 112 | 40-160 | | | |
| 2-Chlorotoluene | 1.96 | 0.200 | mg/kg wet | 2.000 | | 98 | 70-130 | | | |
| 2-Hexanone | 10.6 | 1.00 | mg/kg wet | 10.00 | | 106 | 40-160 | | | |
| 4-Chlorotoluene | 1.93 | 0.200 | mg/kg wet | 2.000 | | 96 | 70-130 | | | |
| 4-Isopropyltoluene | 1.93 | 0.200 | mg/kg wet | 2.000 | | 97 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 9.51 | 1.00 | mg/kg wet | 10.00 | | 95 | 40-160 | | | |
| Acetone | 13.0 | 1.00 | mg/kg wet | 10.00 | | 130 | 40-160 | | | |
| Benzene | 2.01 | 0.200 | mg/kg wet | 2.000 | | 100 | 70-130 | | | |
| Bromobenzene | 1.91 | 0.200 | mg/kg wet | 2.000 | | 96 | 70-130 | | | |
| Bromochloromethane | 2.06 | 0.200 | mg/kg wet | 2.000 | | 103 | 70-130 | | | |
| Bromodichloromethane | 2.35 | 0.200 | mg/kg wet | 2.000 | | 118 | 70-130 | | | |
| Bromoform | 1.92 | 0.200 | mg/kg wet | 2.000 | | 96 | 40-160 | | | |
| Bromomethane | 1.79 | 0.200 | mg/kg wet | 2.000 | | 90 | 40-160 | | | |
| Carbon Disulfide | 2.11 | 0.200 | mg/kg wet | 2.000 | | 106 | 70-130 | | | |
| Carbon Tetrachloride | 2.13 | 0.200 | mg/kg wet | 2.000 | | 106 | 70-130 | | | |
| Chlorobenzene | 1.94 | 0.200 | mg/kg wet | 2.000 | | 97 | 70-130 | | | |
| Chloroethane | 1.98 | 0.200 | mg/kg wet | 2.000 | | 99 | 40-160 | | | |
| Chloroform | 2.09 | 0.200 | mg/kg wet | 2.000 | | 104 | 70-130 | | | |
| Chloromethane | 1.63 | 0.200 | mg/kg wet | 2.000 | | 82 | 40-160 | | | |
| cis-1,2-Dichloroethene | 2.17 | 0.200 | mg/kg wet | 2.000 | | 109 | 70-130 | | | |
| cis-1,3-Dichloropropene | 2.16 | 0.200 | mg/kg wet | 2.000 | | 108 | 40-160 | | | |
| Dibromochloromethane | 2.08 | 0.200 | mg/kg wet | 2.000 | | 104 | 40-160 | | | |
| Dibromomethane | 2.09 | 0.200 | mg/kg wet | 2.000 | | 105 | 70-130 | | | |
| Dichlorodifluoromethane | 1.29 | 0.200 | mg/kg wet | 2.000 | | 65 | 40-160 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics** | | | | | | | | | | |
| **Batch DE40724 - 5035** | | | | | | | | | | |
| Diethyl Ether | 1.93 | 0.200 | mg/kg wet | 2.000 | | 96 | 70-130 | | | |
| Di-isopropyl ether | 2.13 | 0.200 | mg/kg wet | 2.000 | | 107 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 2.13 | 0.200 | mg/kg wet | 2.000 | | 107 | 70-130 | | | |
| Ethylbenzene | 1.95 | 0.200 | mg/kg wet | 2.000 | | 98 | 70-130 | | | |
| Hexachlorobutadiene | 2.04 | 0.200 | mg/kg wet | 2.000 | | 102 | 40-160 | | | |
| Hexachloroethane | 2.08 | 0.200 | mg/kg wet | 2.000 | | 104 | 70-130 | | | |
| Isopropylbenzene | 2.16 | 0.200 | mg/kg wet | 2.000 | | 108 | 70-130 | | | |
| Methyl tert-Butyl Ether | 2.00 | 0.200 | mg/kg wet | 2.000 | | 100 | 70-130 | | | |
| Methylene Chloride | 1.91 | 0.400 | mg/kg wet | 2.000 | | 96 | 70-130 | | | |
| Naphthalene | 1.81 | 0.200 | mg/kg wet | 2.000 | | 91 | 40-160 | | | |
| n-Butylbenzene | 1.99 | 0.200 | mg/kg wet | 2.000 | | 99 | 70-130 | | | |
| n-Propylbenzene | 2.05 | 0.200 | mg/kg wet | 2.000 | | 102 | 70-130 | | | |
| sec-Butylbenzene | 1.95 | 0.200 | mg/kg wet | 2.000 | | 97 | 70-130 | | | |
| Styrene | 1.91 | 0.200 | mg/kg wet | 2.000 | | 95 | 40-160 | | | |
| tert-Butylbenzene | 1.97 | 0.200 | mg/kg wet | 2.000 | | 98 | 70-130 | | | |
| Tertiary-amyl methyl ether | 2.04 | 0.200 | mg/kg wet | 2.000 | | 102 | 70-130 | | | |
| Tetrachloroethene | 1.77 | 0.200 | mg/kg wet | 2.000 | | 88 | 70-130 | | | |
| Tetrahydrofuran | 1.83 | 1.00 | mg/kg wet | 2.000 | | 92 | 70-130 | | | |
| Toluene | 2.01 | 0.200 | mg/kg wet | 2.000 | | 100 | 70-130 | | | |
| trans-1,2-Dichloroethene | 2.05 | 0.200 | mg/kg wet | 2.000 | | 102 | 70-130 | | | |
| trans-1,3-Dichloropropene | 2.04 | 0.200 | mg/kg wet | 2.000 | | 102 | 70-130 | | | |
| Trichloroethene | 1.96 | 0.200 | mg/kg wet | 2.000 | | 98 | 70-130 | | | |
| Trichlorofluoromethane | 2.07 | 0.200 | mg/kg wet | 2.000 | | 103 | 40-160 | | | |
| Vinyl Chloride | 1.71 | 0.200 | mg/kg wet | 2.000 | | 86 | 70-130 | | | |
| Xylene O | 1.99 | 0.200 | mg/kg wet | 2.000 | | 100 | 70-130 | | | |
| Xylene P,M | 4.04 | 0.400 | mg/kg wet | 4.000 | | 101 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *5.38* | | mg/kg wet | *5.000* | | *108* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *5.05* | | mg/kg wet | *5.000* | | *101* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *5.22* | | mg/kg wet | *5.000* | | *104* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *4.95* | | mg/kg wet | *5.000* | | *99* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 2.02 | 0.200 | mg/kg wet | 2.000 | | 101 | 70-130 | 2 | 20 | |
| 1,1,1-Trichloroethane | 2.13 | 0.200 | mg/kg wet | 2.000 | | 106 | 70-130 | 0.4 | 20 | |
| 1,1,2,2-Tetrachloroethane | 1.74 | 0.200 | mg/kg wet | 2.000 | | 87 | 40-160 | 0.8 | 20 | |
| 1,1,2-Trichloroethane | 2.04 | 0.200 | mg/kg wet | 2.000 | | 102 | 70-130 | 0.8 | 20 | |
| 1,1-Dichloroethane | 2.11 | 0.200 | mg/kg wet | 2.000 | | 106 | 70-130 | 3 | 20 | |
| 1,1-Dichloroethene | 2.06 | 0.200 | mg/kg wet | 2.000 | | 103 | 70-130 | 2 | 20 | |
| 1,1-Dichloropropene | 2.02 | 0.400 | mg/kg wet | 2.000 | | 101 | 70-130 | 5 | 20 | |
| 1,2,3-Trichlorobenzene | 1.90 | 0.200 | mg/kg wet | 2.000 | | 95 | 70-130 | 2 | 20 | |
| 1,2,3-Trichloropropane | 1.69 | 0.200 | mg/kg wet | 2.000 | | 84 | 70-130 | 2 | 20 | |
| 1,2,4-Trichlorobenzene | 1.88 | 0.200 | mg/kg wet | 2.000 | | 94 | 70-130 | 0 | 20 | |
| 1,2,4-Trimethylbenzene | 2.03 | 0.200 | mg/kg wet | 2.000 | | 101 | 70-130 | 0.1 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 1.66 | 1.00 | mg/kg wet | 2.000 | | 83 | 70-130 | 2 | 20 | |
| 1,2-Dibromoethane | 1.99 | 0.200 | mg/kg wet | 2.000 | | 99 | 70-130 | 0.2 | 20 | |
| 1,2-Dichlorobenzene | 1.82 | 0.200 | mg/kg wet | 2.000 | | 91 | 70-130 | 0 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics** | | | | | | | | | | |
| **Batch DE40724 - 5035** | | | | | | | | | | |
| 1,2-Dichloroethane | 2.10 | 0.200 | mg/kg wet | 2.000 | | 105 | 70-130 | 3 | 20 | |
| 1,2-Dichloropropane | 2.07 | 0.200 | mg/kg wet | 2.000 | | 103 | 70-130 | 0.2 | 20 | |
| 1,3,5-Trimethylbenzene | 2.05 | 0.200 | mg/kg wet | 2.000 | | 102 | 70-130 | 0.9 | 20 | |
| 1,3-Dichlorobenzene | 1.89 | 0.200 | mg/kg wet | 2.000 | | 95 | 70-130 | 0.1 | 20 | |
| 1,3-Dichloropropane | 1.97 | 0.200 | mg/kg wet | 2.000 | | 99 | 70-130 | 0.4 | 20 | |
| 1,4-Dichlorobenzene | 1.85 | 0.200 | mg/kg wet | 2.000 | | 92 | 70-130 | 0.1 | 20 | |
| 1,4-Dioxane - Screen | 40.4 | 20.0 | mg/kg wet | 40.00 | | 101 | 40-160 | 3 | 20 | |
| 2,2-Dichloropropane | 2.17 | 0.200 | mg/kg wet | 2.000 | | 108 | 70-130 | 2 | 20 | |
| 2-Butanone | 11.2 | 1.00 | mg/kg wet | 10.00 | | 112 | 40-160 | 0.3 | 20 | |
| 2-Chlorotoluene | 1.98 | 0.200 | mg/kg wet | 2.000 | | 99 | 70-130 | 0.9 | 20 | |
| 2-Hexanone | 10.6 | 1.00 | mg/kg wet | 10.00 | | 106 | 40-160 | 0.8 | 20 | |
| 4-Chlorotoluene | 1.94 | 0.200 | mg/kg wet | 2.000 | | 97 | 70-130 | 0.7 | 20 | |
| 4-Isopropyltoluene | 1.91 | 0.200 | mg/kg wet | 2.000 | | 96 | 70-130 | 1 | 20 | |
| 4-Methyl-2-Pentanone | 9.64 | 1.00 | mg/kg wet | 10.00 | | 96 | 40-160 | 1 | 20 | |
| Acetone | 13.4 | 1.00 | mg/kg wet | 10.00 | | 134 | 40-160 | 3 | 20 | |
| Benzene | 2.04 | 0.200 | mg/kg wet | 2.000 | | 102 | 70-130 | 2 | 20 | |
| Bromobenzene | 1.92 | 0.200 | mg/kg wet | 2.000 | | 96 | 70-130 | 0.3 | 20 | |
| Bromochloromethane | 2.11 | 0.200 | mg/kg wet | 2.000 | | 105 | 70-130 | 2 | 20 | |
| Bromodichloromethane | 2.34 | 0.200 | mg/kg wet | 2.000 | | 117 | 70-130 | 0.6 | 20 | |
| Bromoform | 1.90 | 0.200 | mg/kg wet | 2.000 | | 95 | 40-160 | 1 | 20 | |
| Bromomethane | 1.90 | 0.200 | mg/kg wet | 2.000 | | 95 | 40-160 | 6 | 20 | |
| Carbon Disulfide | 2.19 | 0.200 | mg/kg wet | 2.000 | | 110 | 70-130 | 4 | 20 | |
| Carbon Tetrachloride | 2.13 | 0.200 | mg/kg wet | 2.000 | | 106 | 70-130 | 0 | 20 | |
| Chlorobenzene | 1.93 | 0.200 | mg/kg wet | 2.000 | | 97 | 70-130 | 0.2 | 20 | |
| Chloroethane | 1.94 | 0.200 | mg/kg wet | 2.000 | | 97 | 40-160 | 2 | 20 | |
| Chloroform | 2.15 | 0.200 | mg/kg wet | 2.000 | | 107 | 70-130 | 3 | 20 | |
| Chloromethane | 1.67 | 0.200 | mg/kg wet | 2.000 | | 84 | 40-160 | 3 | 20 | |
| cis-1,2-Dichloroethene | 2.11 | 0.200 | mg/kg wet | 2.000 | | 106 | 70-130 | 3 | 20 | |
| cis-1,3-Dichloropropene | 2.22 | 0.200 | mg/kg wet | 2.000 | | 111 | 40-160 | 3 | 20 | |
| Dibromochloromethane | 2.08 | 0.200 | mg/kg wet | 2.000 | | 104 | 40-160 | 0 | 20 | |
| Dibromomethane | 2.13 | 0.200 | mg/kg wet | 2.000 | | 107 | 70-130 | 2 | 20 | |
| Dichlorodifluoromethane | 1.27 | 0.200 | mg/kg wet | 2.000 | | 64 | 40-160 | 2 | 20 | |
| Diethyl Ether | 2.23 | 0.200 | mg/kg wet | 2.000 | | 111 | 70-130 | 14 | 20 | |
| Di-isopropyl ether | 2.18 | 0.200 | mg/kg wet | 2.000 | | 109 | 70-130 | 2 | 20 | |
| Ethyl tertiary-butyl ether | 2.14 | 0.200 | mg/kg wet | 2.000 | | 107 | 70-130 | 0.4 | 20 | |
| Ethylbenzene | 1.97 | 0.200 | mg/kg wet | 2.000 | | 98 | 70-130 | 0.8 | 20 | |
| Hexachlorobutadiene | 1.97 | 0.200 | mg/kg wet | 2.000 | | 98 | 40-160 | 4 | 20 | |
| Hexachloroethane | 2.06 | 0.200 | mg/kg wet | 2.000 | | 103 | 70-130 | 1 | 20 | |
| Isopropylbenzene | 2.18 | 0.200 | mg/kg wet | 2.000 | | 109 | 70-130 | 0.7 | 20 | |
| Methyl tert-Butyl Ether | 2.05 | 0.200 | mg/kg wet | 2.000 | | 102 | 70-130 | 2 | 20 | |
| Methylene Chloride | 1.98 | 0.400 | mg/kg wet | 2.000 | | 99 | 70-130 | 3 | 20 | |
| Naphthalene | 1.78 | 0.200 | mg/kg wet | 2.000 | | 89 | 40-160 | 2 | 20 | |
| n-Butylbenzene | 1.97 | 0.200 | mg/kg wet | 2.000 | | 98 | 70-130 | 0.9 | 20 | |
| n-Propylbenzene | 2.03 | 0.200 | mg/kg wet | 2.000 | | 102 | 70-130 | 0.6 | 20 | |
| sec-Butylbenzene | 1.93 | 0.200 | mg/kg wet | 2.000 | | 96 | 70-130 | 0.9 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics** | | | | | | | | | | |
| **Batch DE40724 - 5035** | | | | | | | | | | |
| Styrene | 1.92 | 0.200 | mg/kg wet | 2.000 | | 96 | 40-160 | 0.8 | 20 | |
| tert-Butylbenzene | 1.97 | 0.200 | mg/kg wet | 2.000 | | 98 | 70-130 | 0.1 | 20 | |
| Tertiary-amyl methyl ether | 2.07 | 0.200 | mg/kg wet | 2.000 | | 104 | 70-130 | 2 | 20 | |
| Tetrachloroethene | 1.86 | 0.200 | mg/kg wet | 2.000 | | 93 | 70-130 | 5 | 20 | |
| Tetrahydrofuran | 1.99 | 1.00 | mg/kg wet | 2.000 | | 99 | 70-130 | 8 | 20 | |
| Toluene | 2.04 | 0.200 | mg/kg wet | 2.000 | | 102 | 70-130 | 2 | 20 | |
| trans-1,2-Dichloroethene | 2.15 | 0.200 | mg/kg wet | 2.000 | | 107 | 70-130 | 5 | 20 | |
| trans-1,3-Dichloropropene | 2.10 | 0.200 | mg/kg wet | 2.000 | | 105 | 70-130 | 3 | 20 | |
| Trichloroethene | 1.97 | 0.200 | mg/kg wet | 2.000 | | 98 | 70-130 | 0.4 | 20 | |
| Trichlorofluoromethane | 2.13 | 0.200 | mg/kg wet | 2.000 | | 106 | 40-160 | 3 | 20 | |
| Vinyl Chloride | 1.80 | 0.200 | mg/kg wet | 2.000 | | 90 | 70-130 | 5 | 20 | |
| Xylene O | 1.98 | 0.200 | mg/kg wet | 2.000 | | 99 | 70-130 | 0.7 | 20 | |
| Xylene P,M | 4.03 | 0.400 | mg/kg wet | 4.000 | | 101 | 70-130 | 0.1 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *5.44* | | mg/kg wet | *5.000* | | *109* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *5.00* | | mg/kg wet | *5.000* | | *100* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *5.21* | | mg/kg wet | *5.000* | | *104* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *4.87* | | mg/kg wet | *5.000* | | *97* | *70-130* | | | |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40104 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40104 - 3546** | | | | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyridine | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.14* | | mg/kg wet | *2.500* | | *86* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.60* | | mg/kg wet | *3.750* | | *123* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.05* | | mg/kg wet | *3.750* | | *81* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.31* | | mg/kg wet | *2.500* | | *93* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.06* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.07* | | mg/kg wet | *2.500* | | *83* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *2.99* | | mg/kg wet | *3.750* | | *80* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.89* | | mg/kg wet | *2.500* | | *116* | *30-130* | | | |
| **LCS** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40104 - 3546** | | | | | | | | | | |
| 1,1-Biphenyl | 2.12 | 0.025 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| 1,2-Dichlorobenzene | 1.99 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| 1,3-Dichlorobenzene | 2.06 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| 1,4-Dichlorobenzene | 1.97 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 30-130 | | | |
| 2,4-Dichlorophenol | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 30-130 | | | |
| 2,4-Dimethylphenol | 3.26 | 0.250 | mg/kg wet | 2.500 | | 130 | 30-130 | | | B+ |
| 2,4-Dinitrophenol | 2.28 | 1.00 | mg/kg wet | 2.500 | | 91 | 15-140 | | | |
| 2,4-Dinitrotoluene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| 2-Chloronaphthalene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| 2-Chlorophenol | 1.94 | 0.250 | mg/kg wet | 2.500 | | 78 | 30-130 | | | |
| 2-Methylnaphthalene | 1.98 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| 2-Methylphenol | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 15-140 | | | |
| 2-Nitrophenol | 2.14 | 0.500 | mg/kg wet | 2.500 | | 86 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.65 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| 3+4-Methylphenol | 4.14 | 0.250 | mg/kg wet | 5.000 | | 83 | 15-140 | | | |
| 4-Bromophenyl-phenylether | 2.85 | 0.250 | mg/kg wet | 2.500 | | 114 | 40-140 | | | |
| 4-Chloroaniline | 2.03 | 0.250 | mg/kg wet | 2.500 | | 81 | 15-140 | | | |
| 4-Nitrophenol | 2.23 | 1.00 | mg/kg wet | 2.500 | | 89 | 15-140 | | | |
| Acenaphthene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Acenaphthylene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Acetophenone | 1.91 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| Aniline | 1.91 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Anthracene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Azobenzene | 1.87 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| Benzo(a)anthracene | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Benzo(a)pyrene | 2.65 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.69 | 0.250 | mg/kg wet | 2.500 | | 108 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 1.68 | 0.250 | mg/kg wet | 2.500 | | 67 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 1.69 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.76 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Butylbenzylphthalate | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Chrysene | 2.55 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.77 | 0.250 | mg/kg wet | 2.500 | | 111 | 40-140 | | | |
| Dibenzofuran | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Diethylphthalate | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Dimethylphthalate | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 15-140 | | | |
| Di-n-butylphthalate | 2.55 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| Di-n-octylphthalate | 2.35 | 0.500 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40104 - 3546** | | | | | | | | | | |
| Fluoranthene | 2.60 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Fluorene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Hexachlorobenzene | 3.02 | 0.250 | mg/kg wet | 2.500 | | 121 | 40-140 | | | |
| Hexachlorobutadiene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Hexachloroethane | 2.01 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | | | |
| Isophorone | 1.71 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | | | |
| Naphthalene | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 40-140 | | | |
| Nitrobenzene | 1.80 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | | | |
| N-Nitrosodimethylamine | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Pentachlorophenol | 2.45 | 1.00 | mg/kg wet | 2.500 | | 98 | 15-140 | | | |
| Phenanthrene | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| Phenol | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 15-140 | | | |
| Pyrene | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Pyridine | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.17* | | mg/kg wet | *2.500* | | *87* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.73* | | mg/kg wet | *3.750* | | *126* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.15* | | mg/kg wet | *3.750* | | *84* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.39* | | mg/kg wet | *2.500* | | *95* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.06* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.88* | | mg/kg wet | *2.500* | | *75* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.01* | | mg/kg wet | *3.750* | | *80* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.88* | | mg/kg wet | *2.500* | | *115* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.10 | 0.025 | mg/kg wet | 2.500 | | 84 | 40-140 | 0.7 | 30 | |
| 1,2,4-Trichlorobenzene | 2.03 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | 2 | 30 | |
| 1,2-Dichlorobenzene | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | 2 | 30 | |
| 1,3-Dichlorobenzene | 2.03 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | 1 | 30 | |
| 1,4-Dichlorobenzene | 2.01 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 2 | 30 | |
| 2,4,5-Trichlorophenol | 2.60 | 0.250 | mg/kg wet | 2.500 | | 104 | 30-130 | 3 | 30 | |
| 2,4,6-Trichlorophenol | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 30-130 | 1 | 30 | |
| 2,4-Dichlorophenol | 2.02 | 0.250 | mg/kg wet | 2.500 | | 81 | 30-130 | 2 | 30 | |
| 2,4-Dimethylphenol | 3.30 | 0.250 | mg/kg wet | 2.500 | | 132 | 30-130 | 1 | 30 | B+ |
| 2,4-Dinitrophenol | 2.30 | 1.00 | mg/kg wet | 2.500 | | 92 | 15-140 | 0.9 | 30 | |
| 2,4-Dinitrotoluene | 2.59 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 2 | 30 | |
| 2,6-Dinitrotoluene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 3 | 30 | |
| 2-Chloronaphthalene | 2.14 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 3 | 30 | |
| 2-Chlorophenol | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 30-130 | 0.1 | 30 | |
| 2-Methylnaphthalene | 1.99 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | 0.4 | 30 | |
| 2-Methylphenol | 1.99 | 0.250 | mg/kg wet | 2.500 | | 80 | 15-140 | 4 | 30 | |
| 2-Nitrophenol | 2.09 | 0.500 | mg/kg wet | 2.500 | | 84 | 30-130 | 2 | 30 | |
| 3,3´-Dichlorobenzidine | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | 2 | 30 | |
| 3+4-Methylphenol | 4.04 | 0.250 | mg/kg wet | 5.000 | | 81 | 15-140 | 3 | 30 | |
| 4-Bromophenyl-phenylether | 2.87 | 0.250 | mg/kg wet | 2.500 | | 115 | 40-140 | 0.6 | 30 | |
| 4-Chloroaniline | 1.94 | 0.250 | mg/kg wet | 2.500 | | 78 | 15-140 | 4 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40104 - 3546** | | | | | | | | | | |
| 4-Nitrophenol | 2.04 | 1.00 | mg/kg wet | 2.500 | | 81 | 15-140 | 9 | 30 | |
| Acenaphthene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 2 | 30 | |
| Acenaphthylene | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 0.9 | 30 | |
| Acetophenone | 1.89 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | 1 | 30 | |
| Aniline | 1.89 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | 1 | 30 | |
| Anthracene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 1 | 30 | |
| Azobenzene | 1.87 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | 0.1 | 30 | |
| Benzo(a)anthracene | 2.50 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 1 | 30 | |
| Benzo(a)pyrene | 2.64 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 0.3 | 30 | |
| Benzo(b)fluoranthene | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 1 | 30 | |
| Benzo(g,h,i)perylene | 2.66 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 1 | 30 | |
| Benzo(k)fluoranthene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 2 | 30 | |
| bis(2-Chloroethoxy)methane | 1.69 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | 0.7 | 30 | |
| bis(2-Chloroethyl)ether | 1.71 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | 1 | 30 | |
| bis(2-chloroisopropyl)Ether | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | 1 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.57 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 2 | 30 | |
| Butylbenzylphthalate | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 2 | 30 | |
| Chrysene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 2 | 30 | |
| Dibenzo(a,h)Anthracene | 2.76 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | 0.7 | 30 | |
| Dibenzofuran | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 2 | 30 | |
| Diethylphthalate | 2.44 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 2 | 30 | |
| Dimethylphthalate | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 15-140 | 3 | 30 | |
| Di-n-butylphthalate | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 2 | 30 | |
| Di-n-octylphthalate | 2.39 | 0.500 | mg/kg wet | 2.500 | | 96 | 40-140 | 1 | 30 | |
| Fluoranthene | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 3 | 30 | |
| Fluorene | 2.36 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 1 | 30 | |
| Hexachlorobenzene | 2.91 | 0.250 | mg/kg wet | 2.500 | | 117 | 40-140 | 4 | 30 | |
| Hexachlorobutadiene | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 1 | 30 | |
| Hexachloroethane | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | 3 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.66 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 1 | 30 | |
| Isophorone | 1.74 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | 2 | 30 | |
| Naphthalene | 1.85 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | 0.6 | 30 | |
| Nitrobenzene | 1.84 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | 2 | 30 | |
| N-Nitrosodimethylamine | 1.82 | 0.250 | mg/kg wet | 2.500 | | 73 | 40-140 | 2 | 30 | |
| Pentachlorophenol | 2.41 | 1.00 | mg/kg wet | 2.500 | | 97 | 15-140 | 1 | 30 | |
| Phenanthrene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 0.8 | 30 | |
| Phenol | 1.85 | 0.250 | mg/kg wet | 2.500 | | 74 | 15-140 | 4 | 30 | |
| Pyrene | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 1 | 30 | |
| Pyridine | 1.77 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | 0.7 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.10* | | mg/kg wet | *2.500* | | *84* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.57* | | mg/kg wet | *3.750* | | *122* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.01* | | mg/kg wet | *3.750* | | *80* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.33* | | mg/kg wet | *2.500* | | *93* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.96* | | mg/kg wet | *3.750* | | *79* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.89* | | mg/kg wet | *2.500* | | *76* | *30-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40104 - 3546** | | | | | | | | | | |
| *Surrogate: Phenol-d6* | *2.83* | | mg/kg wet | *3.750* | | *76* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.80* | | mg/kg wet | *2.500* | | *112* | *30-130* | | | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE40619 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0209* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0219* | | mg/kg wet | *0.02500* | | *87* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0178* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0194* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 76 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0205* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0215* | | mg/kg wet | *0.02500* | | *86* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0183* | | mg/kg wet | *0.02500* | | *73* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | 7 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | 4 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | 8 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 91 | 40-140 | 3 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0218* | | mg/kg wet | *0.02500* | | *87* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0224* | | mg/kg wet | *0.02500* | | *90* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0193* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE40619 - 3540C** | | | | | | | | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40209 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 4,4´-DDD | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDD [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Chlordane (Total) | ND | 0.0200 | mg/kg wet | | | | | | | |
| Chlordane (Total) [2C] | ND | 0.0200 | mg/kg wet | | | | | | | |
| delta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| delta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) [2C] | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8081B Organochlorine Pesticides | | | | | | | | | | |
| **Batch DE40209 - 3546** | | | | | | | | | | |
| Methoxychlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Toxaphene | ND | 0.125 | mg/kg wet | | | | | | | |
| Toxaphene [2C] | ND | 0.125 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0139* | | mg/kg wet | *0.01250* | | *111* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0139* | | mg/kg wet | *0.01250* | | *111* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0119* | | mg/kg wet | *0.01250* | | *95* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0124* | | mg/kg wet | *0.01250* | | *100* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 4,4´-DDD | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | | | |
| 4,4´-DDD [2C] | 0.0154 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | | | |
| 4,4´-DDE | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | | | |
| 4,4´-DDE [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| 4,4´-DDT | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| 4,4´-DDT [2C] | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| Aldrin | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Aldrin [2C] | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| alpha-BHC | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| alpha-BHC [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| alpha-Chlordane | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | | | |
| alpha-Chlordane [2C] | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| beta-BHC | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | | | |
| beta-BHC [2C] | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| delta-BHC | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| delta-BHC [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| Dieldrin | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| Dieldrin [2C] | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | | | |
| Endosulfan I | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Endosulfan I [2C] | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| Endosulfan II | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | | | |
| Endosulfan II [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| Endosulfan Sulfate | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | | | |
| Endosulfan Sulfate [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| Endrin | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |
| Endrin [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| Endrin Ketone | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | | | |
| Endrin Ketone [2C] | 0.0150 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | | | |
| gamma-BHC (Lindane) | 0.0134 | 0.0015 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| gamma-BHC (Lindane) [2C] | 0.0139 | 0.0015 | mg/kg wet | 0.01250 | | 111 | 40-140 | | | |
| gamma-Chlordane | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | | | |
| gamma-Chlordane [2C] | 0.0151 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | | | |
| Heptachlor | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| Heptachlor [2C] | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| Heptachlor Epoxide | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| Heptachlor Epoxide [2C] | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40209 - 3546** | | | | | | | | | | |
| Hexachlorobenzene | 0.0124 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | | | |
| Hexachlorobenzene [2C] | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Methoxychlor | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Methoxychlor [2C] | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0133* | | mg/kg wet | *0.01250* | | *106* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0133* | | mg/kg wet | *0.01250* | | *107* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0124* | | mg/kg wet | *0.01250* | | *99* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0130* | | mg/kg wet | *0.01250* | | *104* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 4,4´-DDD | 0.0157 | 0.0025 | mg/kg wet | 0.01250 | | 126 | 40-140 | 5 | 30 | |
| 4,4´-DDD [2C] | 0.0162 | 0.0025 | mg/kg wet | 0.01250 | | 129 | 40-140 | 5 | 30 | |
| 4,4´-DDE | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | 4 | 30 | |
| 4,4´-DDE [2C] | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 4 | 30 | |
| 4,4´-DDT | 0.0153 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | 8 | 30 | |
| 4,4´-DDT [2C] | 0.0154 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | 8 | 30 | |
| Aldrin | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 4 | 30 | |
| Aldrin [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 3 | 30 | |
| alpha-BHC | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 4 | 30 | |
| alpha-BHC [2C] | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | 4 | 30 | |
| alpha-Chlordane | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | 3 | 30 | |
| alpha-Chlordane [2C] | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 3 | 30 | |
| beta-BHC | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | 3 | 30 | |
| beta-BHC [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 0.2 | 30 | |
| delta-BHC | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 4 | 30 | |
| delta-BHC [2C] | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 5 | 30 | |
| Dieldrin | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 3 | 30 | |
| Dieldrin [2C] | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | 3 | 30 | |
| Endosulfan I | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | 4 | 30 | |
| Endosulfan I [2C] | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 3 | 30 | |
| Endosulfan II | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 4 | 30 | |
| Endosulfan II [2C] | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 4 | 30 | |
| Endosulfan Sulfate | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 6 | 30 | |
| Endosulfan Sulfate [2C] | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | 7 | 30 | |
| Endrin | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 3 | 30 | |
| Endrin [2C] | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 3 | 30 | |
| Endrin Ketone | 0.0158 | 0.0025 | mg/kg wet | 0.01250 | | 127 | 40-140 | 7 | 30 | |
| Endrin Ketone [2C] | 0.0161 | 0.0025 | mg/kg wet | 0.01250 | | 128 | 40-140 | 7 | 30 | |
| gamma-BHC (Lindane) | 0.0138 | 0.0015 | mg/kg wet | 0.01250 | | 111 | 40-140 | 3 | 30 | |
| gamma-BHC (Lindane) [2C] | 0.0144 | 0.0015 | mg/kg wet | 0.01250 | | 115 | 40-140 | 3 | 30 | |
| gamma-Chlordane | 0.0153 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | 3 | 30 | |
| gamma-Chlordane [2C] | 0.0156 | 0.0025 | mg/kg wet | 0.01250 | | 125 | 40-140 | 3 | 30 | |
| Heptachlor | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 3 | 30 | |
| Heptachlor [2C] | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 4 | 30 | |
| Heptachlor Epoxide | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 3 | 30 | |
| Heptachlor Epoxide [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 3 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40209 - 3546** | | | | | | | | | | |
| Hexachlorobenzene | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 4 | 30 | |
| Hexachlorobenzene [2C] | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 5 | 30 | |
| Methoxychlor | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 10 | 30 | |
| Methoxychlor [2C] | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 9 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0140* | | mg/kg wet | *0.01250* | | *112* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0140* | | mg/kg wet | *0.01250* | | *112* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0126* | | mg/kg wet | *0.01250* | | *101* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0131* | | mg/kg wet | *0.01250* | | *105* | *30-150* | | | |
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DE40248 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 2,4,5-T | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-T [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4-D | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-D [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-DB | ND | 0.048 | mg/kg wet | | | | | | | |
| 2,4-DB [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| Dalapon | ND | 0.046 | mg/kg wet | | | | | | | |
| Dalapon [2C] | ND | 0.046 | mg/kg wet | | | | | | | |
| Dicamba | ND | 0.009 | mg/kg wet | | | | | | | |
| Dicamba [2C] | ND | 0.009 | mg/kg wet | | | | | | | |
| Dichlorprop | ND | 0.047 | mg/kg wet | | | | | | | |
| Dichlorprop [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| Dinoseb | ND | 0.048 | mg/kg wet | | | | | | | |
| Dinoseb [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| MCPA | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPA [2C] | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPP | ND | 2.35 | mg/kg wet | | | | | | | |
| MCPP [2C] | ND | 2.35 | mg/kg wet | | | | | | | |
| *Surrogate: DCAA* | *0.170* | | mg/kg wet | *0.2000* | | *85* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.154* | | mg/kg wet | *0.2000* | | *77* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 2,4,5-T | 0.011 | 0.010 | mg/kg wet | 0.01900 | | 56 | 40-140 | | | |
| 2,4,5-T [2C] | 0.010 | 0.010 | mg/kg wet | 0.01900 | | 54 | 40-140 | | | |
| 2,4,5-TP (Silvex) | 0.011 | 0.010 | mg/kg wet | 0.01900 | | 58 | 40-140 | | | |
| 2,4,5-TP (Silvex) [2C] | 0.011 | 0.010 | mg/kg wet | 0.01900 | | 60 | 40-140 | | | |
| 2,4-D | 0.112 | 0.047 | mg/kg wet | 0.1880 | | 60 | 40-140 | | | |
| 2,4-D [2C] | 0.101 | 0.047 | mg/kg wet | 0.1880 | | 54 | 40-140 | | | |
| 2,4-DB | 0.118 | 0.048 | mg/kg wet | 0.1900 | | 62 | 40-140 | | | |
| 2,4-DB [2C] | 0.120 | 0.048 | mg/kg wet | 0.1900 | | 63 | 40-140 | | | |
| Dalapon | 0.273 | 0.046 | mg/kg wet | 0.4550 | | 60 | 40-140 | | | |
| Dalapon [2C] | 0.280 | 0.046 | mg/kg wet | 0.4550 | | 62 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DE40248 - 3546** | | | | | | | | | | |
| Dicamba | 0.011 | 0.009 | mg/kg wet | 0.01880 | | 56 | 40-140 | | | |
| Dicamba [2C] | 0.012 | 0.009 | mg/kg wet | 0.01880 | | 64 | 40-140 | | | |
| Dichlorprop | 0.138 | 0.047 | mg/kg wet | 0.1880 | | 74 | 40-140 | | | |
| Dichlorprop [2C] | 0.122 | 0.047 | mg/kg wet | 0.1880 | | 65 | 40-140 | | | |
| Dinoseb | 0.015 | 0.048 | mg/kg wet | 0.09500 | | 16 | 10-100 | | | |
| Dinoseb [2C] | 0.016 | 0.048 | mg/kg wet | 0.09500 | | 17 | 10-100 | | | |
| MCPA | 12.4 | 2.32 | mg/kg wet | 18.60 | | 67 | 40-140 | | | |
| MCPA [2C] | 13.0 | 2.32 | mg/kg wet | 18.60 | | 70 | 40-140 | | | |
| MCPP | 12.2 | 2.35 | mg/kg wet | 18.80 | | 65 | 40-140 | | | |
| MCPP [2C] | 12.5 | 2.35 | mg/kg wet | 18.80 | | 66 | 40-140 | | | |
| *Surrogate: DCAA* | *0.144* | | mg/kg wet | *0.2000* | | *72* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.128* | | mg/kg wet | *0.2000* | | *64* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 2,4,5-T | 0.013 | 0.010 | mg/kg wet | 0.01900 | | 70 | 40-140 | 22 | 30 | |
| 2,4,5-T [2C] | 0.013 | 0.010 | mg/kg wet | 0.01900 | | 70 | 40-140 | 26 | 30 | |
| 2,4,5-TP (Silvex) | 0.014 | 0.010 | mg/kg wet | 0.01900 | | 72 | 40-140 | 22 | 30 | |
| 2,4,5-TP (Silvex) [2C] | 0.014 | 0.010 | mg/kg wet | 0.01900 | | 76 | 40-140 | 24 | 30 | |
| 2,4-D | 0.135 | 0.047 | mg/kg wet | 0.1880 | | 72 | 40-140 | 18 | 30 | |
| 2,4-D [2C] | 0.124 | 0.047 | mg/kg wet | 0.1880 | | 66 | 40-140 | 20 | 30 | |
| 2,4-DB | 0.144 | 0.048 | mg/kg wet | 0.1900 | | 76 | 40-140 | 19 | 30 | |
| 2,4-DB [2C] | 0.153 | 0.048 | mg/kg wet | 0.1900 | | 80 | 40-140 | 24 | 30 | |
| Dalapon | 0.335 | 0.046 | mg/kg wet | 0.4550 | | 74 | 40-140 | 20 | 30 | |
| Dalapon [2C] | 0.356 | 0.046 | mg/kg wet | 0.4550 | | 78 | 40-140 | 24 | 30 | |
| Dicamba | 0.012 | 0.009 | mg/kg wet | 0.01880 | | 66 | 40-140 | 16 | 30 | |
| Dicamba [2C] | 0.015 | 0.009 | mg/kg wet | 0.01880 | | 78 | 40-140 | 20 | 30 | |
| Dichlorprop | 0.162 | 0.047 | mg/kg wet | 0.1880 | | 86 | 40-140 | 16 | 30 | |
| Dichlorprop [2C] | 0.148 | 0.047 | mg/kg wet | 0.1880 | | 79 | 40-140 | 19 | 30 | |
| Dinoseb | 0.020 | 0.048 | mg/kg wet | 0.09500 | | 21 | 10-100 | 26 | 30 | |
| Dinoseb [2C] | 0.021 | 0.048 | mg/kg wet | 0.09500 | | 22 | 10-100 | 27 | 30 | |
| MCPA | 15.2 | 2.32 | mg/kg wet | 18.60 | | 82 | 40-140 | 20 | 30 | |
| MCPA [2C] | 16.0 | 2.32 | mg/kg wet | 18.60 | | 86 | 40-140 | 21 | 30 | |
| MCPP | 14.9 | 2.35 | mg/kg wet | 18.80 | | 79 | 40-140 | 19 | 30 | |
| MCPP [2C] | 15.7 | 2.35 | mg/kg wet | 18.80 | | 84 | 40-140 | 23 | 30 | |
| *Surrogate: DCAA* | *0.171* | | mg/kg wet | *0.2000* | | *85* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.147* | | mg/kg wet | *0.2000* | | *73* | *30-150* | | | |
| **Batch DE40659 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 2,4,5-T | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-T [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4-D | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-D [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-DB | ND | 0.048 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DE40659 - 3546** | | | | | | | | | | |
| 2,4-DB [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| Dalapon | ND | 0.046 | mg/kg wet | | | | | | | |
| Dalapon [2C] | ND | 0.046 | mg/kg wet | | | | | | | |
| Dicamba | ND | 0.009 | mg/kg wet | | | | | | | |
| Dicamba [2C] | ND | 0.009 | mg/kg wet | | | | | | | |
| Dichlorprop | ND | 0.047 | mg/kg wet | | | | | | | |
| Dichlorprop [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| Dinoseb | ND | 0.048 | mg/kg wet | | | | | | | |
| Dinoseb [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| MCPA | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPA [2C] | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPP | ND | 2.35 | mg/kg wet | | | | | | | |
| MCPP [2C] | ND | 2.35 | mg/kg wet | | | | | | | |
| *Surrogate: DCAA* | *0.149* | | mg/kg wet | *0.2000* | | *74* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.138* | | mg/kg wet | *0.2000* | | *69* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 2,4,5-T | 0.015 | 0.010 | mg/kg wet | 0.01900 | | 78 | 40-140 | | | |
| 2,4,5-T [2C] | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 86 | 40-140 | | | |
| 2,4,5-TP (Silvex) | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 82 | 40-140 | | | |
| 2,4,5-TP (Silvex) [2C] | 0.018 | 0.010 | mg/kg wet | 0.01900 | | 94 | 40-140 | | | |
| 2,4-D | 0.149 | 0.047 | mg/kg wet | 0.1880 | | 79 | 40-140 | | | |
| 2,4-D [2C] | 0.150 | 0.047 | mg/kg wet | 0.1880 | | 80 | 40-140 | | | |
| 2,4-DB | 0.160 | 0.048 | mg/kg wet | 0.1900 | | 84 | 40-140 | | | |
| 2,4-DB [2C] | 0.190 | 0.048 | mg/kg wet | 0.1900 | | 100 | 40-140 | | | |
| Dalapon | 0.339 | 0.046 | mg/kg wet | 0.4550 | | 74 | 40-140 | | | |
| Dalapon [2C] | 0.393 | 0.046 | mg/kg wet | 0.4550 | | 86 | 40-140 | | | |
| Dicamba | 0.015 | 0.009 | mg/kg wet | 0.01880 | | 78 | 40-140 | | | |
| Dicamba [2C] | 0.018 | 0.009 | mg/kg wet | 0.01880 | | 98 | 40-140 | | | |
| Dichlorprop | 0.184 | 0.047 | mg/kg wet | 0.1880 | | 98 | 40-140 | | | |
| Dichlorprop [2C] | 0.186 | 0.047 | mg/kg wet | 0.1880 | | 99 | 40-140 | | | |
| Dinoseb | 0.026 | 0.048 | mg/kg wet | 0.09500 | | 28 | 10-100 | | | |
| Dinoseb [2C] | 0.030 | 0.048 | mg/kg wet | 0.09500 | | 31 | 10-100 | | | |
| MCPA | 15.6 | 2.32 | mg/kg wet | 18.60 | | 84 | 40-140 | | | |
| MCPA [2C] | 18.2 | 2.32 | mg/kg wet | 18.60 | | 98 | 40-140 | | | |
| MCPP | 16.3 | 2.35 | mg/kg wet | 18.80 | | 87 | 40-140 | | | |
| MCPP [2C] | 18.4 | 2.35 | mg/kg wet | 18.80 | | 98 | 40-140 | | | |
| *Surrogate: DCAA* | *0.218* | | mg/kg wet | *0.2000* | | *109* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.206* | | mg/kg wet | *0.2000* | | *103* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 2,4,5-T | 0.013 | 0.010 | mg/kg wet | 0.01900 | | 68 | 40-140 | 14 | 30 | |
| 2,4,5-T [2C] | 0.014 | 0.010 | mg/kg wet | 0.01900 | | 74 | 40-140 | 15 | 30 | |
| 2,4,5-TP (Silvex) | 0.014 | 0.010 | mg/kg wet | 0.01900 | | 72 | 40-140 | 13 | 30 | |
| 2,4,5-TP (Silvex) [2C] | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 82 | 40-140 | 14 | 30 | |
| 2,4-D | 0.134 | 0.047 | mg/kg wet | 0.1880 | | 71 | 40-140 | 11 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DE40659 - 3546** | | | | | | | | | | |
| 2,4-D [2C] | 0.130 | 0.047 | mg/kg wet | 0.1880 | | 69 | 40-140 | 14 | 30 | |
| 2,4-DB | 0.144 | 0.048 | mg/kg wet | 0.1900 | | 76 | 40-140 | 11 | 30 | |
| 2,4-DB [2C] | 0.164 | 0.048 | mg/kg wet | 0.1900 | | 86 | 40-140 | 14 | 30 | |
| Dalapon | 0.309 | 0.046 | mg/kg wet | 0.4550 | | 68 | 40-140 | 9 | 30 | |
| Dalapon [2C] | 0.319 | 0.046 | mg/kg wet | 0.4550 | | 70 | 40-140 | 21 | 30 | |
| Dicamba | 0.014 | 0.009 | mg/kg wet | 0.01880 | | 72 | 40-140 | 8 | 30 | |
| Dicamba [2C] | 0.016 | 0.009 | mg/kg wet | 0.01880 | | 86 | 40-140 | 13 | 30 | |
| Dichlorprop | 0.164 | 0.047 | mg/kg wet | 0.1880 | | 87 | 40-140 | 12 | 30 | |
| Dichlorprop [2C] | 0.164 | 0.047 | mg/kg wet | 0.1880 | | 87 | 40-140 | 13 | 30 | |
| Dinoseb | 0.022 | 0.048 | mg/kg wet | 0.09500 | | 23 | 10-100 | 19 | 30 | |
| Dinoseb [2C] | 0.025 | 0.048 | mg/kg wet | 0.09500 | | 26 | 10-100 | 18 | 30 | |
| MCPA | 13.9 | 2.32 | mg/kg wet | 18.60 | | 75 | 40-140 | 11 | 30 | |
| MCPA [2C] | 16.0 | 2.32 | mg/kg wet | 18.60 | | 86 | 40-140 | 13 | 30 | |
| MCPP | 14.5 | 2.35 | mg/kg wet | 18.80 | | 77 | 40-140 | 12 | 30 | |
| MCPP [2C] | 15.8 | 2.35 | mg/kg wet | 18.80 | | 84 | 40-140 | 15 | 30 | |
| *Surrogate: DCAA* | *0.185* | | mg/kg wet | *0.2000* | | *92* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.172* | | mg/kg wet | *0.2000* | | *86* | *30-150* | | | |
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40151 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *4.44* | | mg/kg wet | *5.000* | | *89* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | | | |
| Docosane (C22) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Dodecane (C12) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Eicosane (C20) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Hexacosane (C26) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Hexadecane (C16) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40151 - 3546** | | | | | | | | | | |
| Nonadecane (C19) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 62 | 30-140 | | | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Octadecane (C18) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Tetracosane (C24) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Tetradecane (C14) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 28.8 | 10.0 | mg/kg wet | 35.00 | | 82 | 40-140 | | | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *4.23* | | mg/kg wet | *5.000* | | *85* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | 4 | 25 | |
| Docosane (C22) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 2 | 25 | |
| Dodecane (C12) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 3 | 25 | |
| Eicosane (C20) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 2 | 25 | |
| Hexacosane (C26) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 0.7 | 25 | |
| Hexadecane (C16) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | 2 | 25 | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 95 | 40-140 | 0.5 | 25 | |
| Nonadecane (C19) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 3 | 25 | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 65 | 30-140 | 5 | 25 | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 0.1 | 25 | |
| Octadecane (C18) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 3 | 25 | |
| Tetracosane (C24) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | 2 | 25 | |
| Tetradecane (C14) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 3 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 29.9 | 10.0 | mg/kg wet | 35.00 | | 85 | 40-140 | 4 | 25 | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 0.3 | 25 | |
| *Surrogate: O-Terphenyl* | *4.25* | | mg/kg wet | *5.000* | | *85* | *40-140* | | | |
| **Batch DE40661 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *4.27* | | mg/kg wet | *5.000* | | *85* | *40-140* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40661 - 3546** | | | | | | | | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| Docosane (C22) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Dodecane (C12) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Eicosane (C20) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Hexacosane (C26) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Hexadecane (C16) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Hexatriacontane (C36) | 2.9 | 0.2 | mg/kg wet | 2.500 | | 115 | 40-140 | | | |
| Nonadecane (C19) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 62 | 30-140 | | | |
| Octacosane (C28) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Octadecane (C18) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Tetracosane (C24) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Tetradecane (C14) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 32.8 | 10.0 | mg/kg wet | 35.00 | | 94 | 40-140 | | | |
| Triacontane (C30) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *4.29* | | mg/kg wet | *5.000* | | *86* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 0.5 | 25 | |
| Docosane (C22) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | 3 | 25 | |
| Dodecane (C12) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 0.2 | 25 | |
| Eicosane (C20) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | 2 | 25 | |
| Hexacosane (C26) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | 4 | 25 | |
| Hexadecane (C16) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | 3 | 25 | |
| Hexatriacontane (C36) | 2.7 | 0.2 | mg/kg wet | 2.500 | | 108 | 40-140 | 6 | 25 | |
| Nonadecane (C19) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 2 | 25 | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 63 | 30-140 | 2 | 25 | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | 4 | 25 | |
| Octadecane (C18) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 4 | 25 | |
| Tetracosane (C24) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 3 | 25 | |
| Tetradecane (C14) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | 1 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 32.2 | 10.0 | mg/kg wet | 35.00 | | 92 | 40-140 | 2 | 25 | |
| Triacontane (C30) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | 4 | 25 | |
| *Surrogate: O-Terphenyl* | *4.13* | | mg/kg wet | *5.000* | | *83* | *40-140* | | | |
| **Classical Chemistry** | | | | | | | | | | |
| **Batch DE40156 - General Preparation** | | | | | | | | | | |
| **Reference** | | | | | | | | | | |
| Flashpoint | 81 | | °F | 81.00 | | 100 | 97.9-102.1 | | | |
| **Batch DE40162 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Conductivity | ND | 5 | umhos/cm | | | | | | | |
| **LCS** | | | | | | | | | | |
| Conductivity | 1380 | | umhos/cm | 1410 | | 98 | 90-110 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Classical Chemistry** | | | | | | | | | | |
| **Batch DE40249 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Reactive Cyanide | ND | 2.0 | mg/kg | | | | | | | |
| Reactive Sulfide | ND | 2.0 | mg/kg | | | | | | | |
| **LCS** | | | | | | | | | | |
| Reactive Cyanide | 4.1 | 2.0 | mg/kg | 100.3 | | 4 | 0.68-5.41 | | | |
| Reactive Sulfide | 2.0 | 2.0 | mg/kg | 10.00 | | 20 | 0-44 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

**Notes and Definitions**

| | |
|---|---|
| P | Percent difference between primary and confirmation results exceeds 40% (P). |
| B+ | Blank Spike recovery is above upper control limit (B+). |
| CD- | Continuing Calibration %Diff/Drift is below control limit (CD-). |
| CD+ | Continuing Calibration %Diff/Drift is above control limit (CD+). |
| D | Diluted. |
| D+ | Relative percent difference for duplicate is outside of criteria (D+). |
| > | Greater than. |
| LC | Lower value is used due to matrix interferences (LC). |
| Z18 | Temperature is not within 23 +/-2 ºC. |
| Q | Calibration required quadratic regression (Q). |
| RRF | Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration |
| S+ | Surrogate recovery(ies) above upper control limit (S+). |
| U | Analyte included in the analysis, but not detected |
| WL | Results obtained from a deionized water leach of the sample. |
| X* | RSD of replicate analysis > 20%. Reanalysis produced similar results. |
| E | Reported above the quantitation limit; Estimated value (E). |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0026

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0026
Date Received: 5/1/2024
Project Due Date: 5/8/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 5.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** (Yes) / No / NA
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? (Yes) / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? (Yes) / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered
    c. Low Level VOA vials frozen: Date: 5/1/24 Time: 1105 By: TD
       Yes / No To Be Lab Filtered

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 543374 | Yes | N/A | Yes | 8 oz jar | NP | |
| 1 | 543375 | Yes | N/A | Yes | 8 oz jar | NP | |
| 1 | 543392 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 1 | 543393 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 1 | 543410 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 1 | 543542 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 543376 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 543377 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 543394 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 2 | 543395 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 2 | 543411 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 2 | 543543 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 543378 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 543379 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 543396 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 3 | 543397 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 3 | 543412 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 3 | 543544 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 543380 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 543381 | Yes | N/A | Yes | 8 oz jar | NP | |

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24E0026

Date Received: 5/1/2024

| | | | | | | |
|---|---|---|---|---|---|---|
| 4 | 543398 | Yes | N/A | Yes | VOA Vial | DI Water |
| 4 | 543399 | Yes | N/A | Yes | VOA Vial | DI Water |
| 4 | 543413 | Yes | N/A | Yes | VOA Vial | MeOH |
| 4 | 543545 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 5 | 543382 | Yes | N/A | Yes | 8 oz jar | NP |
| 5 | 543383 | Yes | N/A | Yes | 8 oz jar | NP |
| 5 | 543400 | Yes | N/A | Yes | VOA Vial | DI Water |
| 5 | 543401 | Yes | N/A | Yes | VOA Vial | DI Water |
| 5 | 543414 | Yes | N/A | Yes | VOA Vial | MeOH |
| 5 | 543546 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 6 | 543384 | Yes | N/A | Yes | 8 oz jar | NP |
| 6 | 543385 | Yes | N/A | Yes | 8 oz jar | NP |
| 6 | 543402 | Yes | N/A | Yes | VOA Vial | DI Water |
| 6 | 543403 | Yes | N/A | Yes | VOA Vial | DI Water |
| 6 | 543415 | Yes | N/A | Yes | VOA Vial | MeOH |
| 6 | 543547 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 7 | 543386 | Yes | N/A | Yes | 8 oz jar | NP |
| 7 | 543387 | Yes | N/A | Yes | 8 oz jar | NP |
| 7 | 543404 | Yes | N/A | Yes | VOA Vial | DI Water |
| 7 | 543405 | Yes | N/A | Yes | VOA Vial | DI Water |
| 7 | 543416 | Yes | N/A | Yes | VOA Vial | MeOH |
| 7 | 543548 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 8 | 543388 | Yes | N/A | Yes | 8 oz jar | NP |
| 8 | 543389 | Yes | N/A | Yes | 8 oz jar | NP |
| 8 | 543406 | Yes | N/A | Yes | VOA Vial | DI Water |
| 8 | 543407 | Yes | N/A | Yes | VOA Vial | DI Water |
| 8 | 543417 | Yes | N/A | Yes | VOA Vial | MeOH |
| 8 | 543549 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 9 | 543390 | Yes | N/A | Yes | 8 oz jar | NP |
| 9 | 543391 | Yes | N/A | Yes | 8 oz jar | NP |
| 9 | 543408 | Yes | N/A | Yes | VOA Vial | DI Water |
| 9 | 543409 | Yes | N/A | Yes | VOA Vial | DI Water |
| 9 | 543418 | Yes | N/A | Yes | VOA Vial | MeOH |
| 9 | 543550 | Yes | N/A | Yes | 4 oz. Jar | NP |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials MM

Are barcode labels on correct containers? Yes / No

Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA

Are all Hex Chrome stickers attached? Yes / No / NA

Are all QC stickers attached? Yes / No / NA

Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: _____ Date & Time: 5/1/24 1619

Reviewed By: _____ Date & Time: 5/1/24

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24E0026

| | | | |
|---|---|---|---|
| **Turn Time** | 5 | Days | |
| **Regulatory State** | Massachusetts | | |
| **Is this project for any of the following?:** | ○ CT RCP | ◉ MA MCP | ○ RGP |
| **Reporting Limits** | MA LF | | |
| **Electonic Deliverables** | ☑ Data Checker | ☑ Excel | ☑ Other (Please Specify →) EDD |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | RCRA8 Metals | PCB | TPH | SVOC - incl pyr | Pest - incl Tox | Herbicides | Reactivity | Conductivity | pH | Free Liquid | Flashpoint | VOC - high | VOC - low | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~[illegible]~~ | | | ~~Composite~~ | ~~Soil~~ | ~~FF-3~~ | | | | | | | | | | | | | | | | |
| ~~[illegible]~~ | | | ~~Composite~~ | ~~Soil~~ | ~~FF-1~~ | | | | | | | | | | | | | | | | |
| ~~[illegible]~~ | | | ~~Composite~~ | ~~Soil~~ | ~~FF-0.5~~ | | | | | | | | | | | | | | | | |
| ~~[illegible]~~ | | | ~~Composite~~ | ~~Soil~~ | ~~FF0.5~~ | | | | | | | | | | | | | | | | |
| 1 | 4-30-24 | 1010 | Composite | Soil | DD-7 | / | / | / | / | / | / | / | / | / | / | / | / | / | | | |
| 2 | 4-30-24 | 1000 | Composite | Soil | DD-5 | / | / | / | / | / | / | / | / | / | / | / | / | / | | | |
| 3 | 4-30-24 | 0840 | Composite | Soil | DD-3 | / | / | / | / | / | / | / | / | / | / | / | / | / | | | |
| 4 | 4-30-24 | 08:50 | Composite | Soil | ~~DD-1~~ HH-3 | / | / | / | / | / | / | / | / | / | / | / | / | / | | | |
| 5 | 4-30-24 | 10:50 | Composite | Soil | BB-7 | / | / | / | / | / | / | / | / | / | / | / | / | / | | | |
| 6 | 4-30-24 | 11:25 | Composite | Soil | BB-5 | / | / | / | / | / | / | / | / | / | / | / | / | / | | | |
| **Container Type:** | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | | | | | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | V | V | | | |
| **Container Volume:** | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | | | | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 7 | 7 | | | |
| **Preservation Code:** | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 10 | | | |
| | | | | | **Number of Containers per Sample:** | 1 | | | | | 1 | | | | | 9 | 1 | 2 | | | |

**Laboratory Use Only**

Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 5.1 °C IR

**Sampled by :** DGB + KD

**Comments:** Please specify "Other" preservative and containers types in this space

Run TCLP if fails 20x

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| [signature] 5/1/24 13:16 | [signature] 5/1/24 13:16 | [signature] 5/1/24 15:16 | [signature] 5/1/24 1516 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
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185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 24E0026

| | | | |
|---|---|---|---|
| **Turn Time** | 5 | Days | |
| **Regulatory State** | Massachusetts | | |
| **Reporting Limits** | MA LF | | |
| **Is this project for any of the following?:** | ○ CT RCP | ◉ MA MCP | ○ RGP |
| **Electonic Deliverables** | ☑ Data Checker | ☑ Excel | |
| | ☑ Other (Please Specify →) | EDD | |

| **Company Name** | **Project #** | **Project Name** |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | RCRA8 Metals | PCB | TPH | SVOC - incl pyr | Pest - incl Tox | Herbicides | Reactivity | Conductivity | pH | Free Liquid | Flashpoint | VOC - high | VOC - low |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 4-30-24 | 1155 | Composite | Soil | BB-3 | | | | | | | | | | | | | |
| 8 | 1 | 1210 | Composite | Soil | BB-1 | | | | | | | | | | | | | |
| 9 | 1 | 1430 | Composite | Soil | AA-8.5 | | | | | | | | | | | | | |
| | | | Composite | Soil | A-7 | | | | | | | | | | | | | |
| | | | Composite | Soil | A-5 | | | | | | | | | | | | | |
| | | | Composite | Soil | A-3 | | | | | | | | | | | | | |
| | | | Composite | Soil | A-1 | | | | | | | | | | | | | |
| | | | Composite | Soil | C-7 | | | | | | | | | | | | | |
| | | | Composite | Soil | C-5 | | | | | | | | | | | | | |
| | | | Composite | Soil | C-3 | | | | | | | | | | | | | |
| **Container Type:** | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | | | | | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | V | V |
| **Container Volume:** | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | | | | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 7 | 7 |
| **Preservation Code:** | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 10 |
| | | | | | **Number of Containers per Sample:** | 1 | | | | | 1 | | | | | 9 | 1 | 2 |

**Laboratory Use Only**

Cooler Present: yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 5.1 °C 1a

**Sampled by :** DGB + KD

**Comments:** Please specify "Other" preservative and containers types in this space

Run TCLP if fails 20x

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| | 5/1/24 13:16 | 5/1/24 15:14 | 5/1/24 1516 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E0027**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 7:32 pm, May 10, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0027

## SAMPLE RECEIPT

The following samples were received on May 01, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E0027-01 | BB-6 4-5 | Soil | 8082A |
| 24E0027-02 | BB-5 4-5 | Soil | 8082A |
| 24E0027-03 | BB-4 4-5 | Soil | 8082A |
| 24E0027-04 | BB-3 4-5 | Soil | 8082A |
| 24E0027-05 | AA-0 4-5 | Soil | 8082A |
| 24E0027-06 | AA-1 4-5 | Soil | 8082A |
| 24E0027-07 | AA-2 4-5 | Soil | 8082A |
| 24E0027-08 | AA-4 4-5 | Soil | 8082A |
| 24E0027-09 | AA-4 DUP 1-2 | Soil | 8082A |
| 24E0027-10 | AA-5 1-2 | Soil | 8082A |
| 24E0027-11 | AA-5 4-5 | Soil | 8082A |
| 24E0027-12 | AA-6 1-2 | Soil | 8082A |
| 24E0027-13 | AA-6 4-5 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0027

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**

DE40820-BS1 **Surrogate recovery(ies) below lower control limit (S-).**
Tetrachloro-m-xylene (19% @ 30-150%), Tetrachloro-m-xylene [2C] (18% @ 30-150%)

DE40820-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
Aroclor 1016 (38% @ 30%), Aroclor 1016 [2C] (38% @ 30%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0027

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0027

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E0027-01 through 24E0027-13**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? ***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.* | Yes (x) No ( )* |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: May 10, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-6 4-5
Date Sampled: 04/30/24 11:10
Percent Solids: 84
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0027
ESS Laboratory Sample ID: 24E0027-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/6/24 11:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/07/24 23:09 | --- | DE40619 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/07/24 23:09 | --- | DE40619 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/07/24 23:09 | --- | DE40619 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/07/24 23:09 | --- | DE40619 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/07/24 23:09 | --- | DE40619 |
| **Aroclor 1254 [2C]** | **0.09** (0.06) | --- | 8082A | --- | 1 | 05/07/24 23:09 | --- | DE40619 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/07/24 23:09 | --- | DE40619 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/07/24 23:09 | --- | DE40619 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/07/24 23:09 | --- | DE40619 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *88 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-5 4-5
Date Sampled: 04/30/24 11:25
Percent Solids: 83
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0027
ESS Laboratory Sample ID: 24E0027-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 8:38 | --- | DE40819 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 8:38 | --- | DE40819 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 8:38 | --- | DE40819 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 8:38 | --- | DE40819 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 8:38 | --- | DE40819 |
| **Aroclor 1254** | **0.08** (0.06) | --- | 8082A | --- | 1 | 05/10/24 8:38 | --- | DE40819 |
| Aroclor 1260 [2C] | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 8:38 | --- | DE40819 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 8:38 | --- | DE40819 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 8:38 | --- | DE40819 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *70 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-4 4-5
Date Sampled: 04/30/24 11:45
Percent Solids: 90
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0027
ESS Laboratory Sample ID: 24E0027-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 8:58 | --- | DE40819 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 8:58 | --- | DE40819 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 8:58 | --- | DE40819 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 8:58 | --- | DE40819 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 8:58 | --- | DE40819 |
| **Aroclor 1254 [2C]** | **0.09** (0.06) | --- | 8082A | --- | 1 | 05/10/24 8:58 | --- | DE40819 |
| Aroclor 1260 [2C] | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 8:58 | --- | DE40819 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 8:58 | --- | DE40819 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 8:58 | --- | DE40819 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *67 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-3 4-5
Date Sampled: 04/30/24 11:55
Percent Solids: 91
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0027
ESS Laboratory Sample ID: 24E0027-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 9:18 | --- | DE40819 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 9:18 | --- | DE40819 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 9:18 | --- | DE40819 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 9:18 | --- | DE40819 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 9:18 | --- | DE40819 |
| **Aroclor 1254 [2C]** | **0.3** (0.05) | --- | 8082A | --- | 1 | 05/10/24 9:18 | --- | DE40819 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 9:18 | --- | DE40819 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 9:18 | --- | DE40819 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 9:18 | --- | DE40819 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *71 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *66 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-0 4-5
Date Sampled: 04/30/24 13:10
Percent Solids: 81
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0027
ESS Laboratory Sample ID: 24E0027-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 9:38 | --- | DE40819 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 9:38 | --- | DE40819 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 9:38 | --- | DE40819 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 9:38 | --- | DE40819 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 9:38 | --- | DE40819 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/10/24 9:38 | --- | DE40819 |
| **Aroclor 1260 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/10/24 9:38 | --- | DE40819 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 9:38 | --- | DE40819 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 9:38 | --- | DE40819 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *89 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *65 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-1 4-5
Date Sampled: 04/30/24 13:20
Percent Solids: 94
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0027
ESS Laboratory Sample ID: 24E0027-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 18:40 | --- | DE40820 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 18:40 | --- | DE40820 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 18:40 | --- | DE40820 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 18:40 | --- | DE40820 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 18:40 | --- | DE40820 |
| **Aroclor 1254 [2C]** | **0.6** (0.05) | --- | 8082A | --- | 1 | 05/09/24 18:40 | --- | DE40820 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 18:40 | --- | DE40820 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 18:40 | --- | DE40820 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 18:40 | --- | DE40820 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *76 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *84 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-2 4-5
Date Sampled: 04/30/24 13:45
Percent Solids: 90
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0027
ESS Laboratory Sample ID: 24E0027-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 19:00 | --- | DE40820 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 19:00 | --- | DE40820 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 19:00 | --- | DE40820 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 19:00 | --- | DE40820 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 19:00 | --- | DE40820 |
| **Aroclor 1254 [2C]** | **0.6** (0.05) | --- | 8082A | --- | 1 | 05/09/24 19:00 | --- | DE40820 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 19:00 | --- | DE40820 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 19:00 | --- | DE40820 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 19:00 | --- | DE40820 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *77 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-4 4-5
Date Sampled: 04/30/24 14:00
Percent Solids: 90
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0027
ESS Laboratory Sample ID: 24E0027-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 19:20 | --- | DE40820 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 19:20 | --- | DE40820 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 19:20 | --- | DE40820 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 19:20 | --- | DE40820 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 19:20 | --- | DE40820 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/09/24 19:20 | --- | DE40820 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 19:20 | --- | DE40820 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 19:20 | --- | DE40820 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 19:20 | --- | DE40820 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *71 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-4 DUP 1-2
Date Sampled: 04/30/24 14:00
Percent Solids: 94
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0027
ESS Laboratory Sample ID: 24E0027-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 19:40 | --- | DE40820 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 19:40 | --- | DE40820 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 19:40 | --- | DE40820 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 19:40 | --- | DE40820 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 19:40 | --- | DE40820 |
| **Aroclor 1254 [2C]** | **0.4** (0.05) | --- | 8082A | --- | 1 | 05/09/24 19:40 | --- | DE40820 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 19:40 | --- | DE40820 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 19:40 | --- | DE40820 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 19:40 | --- | DE40820 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *89 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-5 1-2
Date Sampled: 04/30/24 14:10
Percent Solids: 93
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0027
ESS Laboratory Sample ID: 24E0027-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 20:00 | --- | DE40820 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 20:00 | --- | DE40820 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 20:00 | --- | DE40820 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 20:00 | --- | DE40820 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 20:00 | --- | DE40820 |
| **Aroclor 1254 [2C]** | **0.06** (0.05) | --- | 8082A | --- | 1 | 05/09/24 20:00 | --- | DE40820 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 20:00 | --- | DE40820 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 20:00 | --- | DE40820 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 20:00 | --- | DE40820 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-5 4-5
Date Sampled: 04/30/24 14:10
Percent Solids: 88
Initial Volume: 20.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0027
ESS Laboratory Sample ID: 24E0027-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 20:19 | --- | DE40820 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 20:19 | --- | DE40820 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 20:19 | --- | DE40820 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 20:19 | --- | DE40820 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 20:19 | --- | DE40820 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/09/24 20:19 | --- | DE40820 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 20:19 | --- | DE40820 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 20:19 | --- | DE40820 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 20:19 | --- | DE40820 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-6 1-2
Date Sampled: 04/30/24 14:20
Percent Solids: 92
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0027
ESS Laboratory Sample ID: 24E0027-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 20:39 | --- | DE40820 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 20:39 | --- | DE40820 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 20:39 | --- | DE40820 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 20:39 | --- | DE40820 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 20:39 | --- | DE40820 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 20:39 | --- | DE40820 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 20:39 | --- | DE40820 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 20:39 | --- | DE40820 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 20:39 | --- | DE40820 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *90 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *89 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-6 4-5
Date Sampled: 04/30/24 14:20
Percent Solids: 79
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0027
ESS Laboratory Sample ID: 24E0027-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 20:59 | --- | DE40820 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 20:59 | --- | DE40820 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 20:59 | --- | DE40820 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 20:59 | --- | DE40820 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 20:59 | --- | DE40820 |
| **Aroclor 1254 [2C]** | **0.08** (0.06) | --- | 8082A | --- | 1 | 05/09/24 20:59 | --- | DE40820 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 20:59 | --- | DE40820 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 20:59 | --- | DE40820 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 20:59 | --- | DE40820 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *92 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *94 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0027

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE40619 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0209* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0219* | | mg/kg wet | *0.02500* | | *87* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0178* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0194* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 76 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0205* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0215* | | mg/kg wet | *0.02500* | | *86* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0183* | | mg/kg wet | *0.02500* | | *73* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | 7 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | 4 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | 8 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 91 | 40-140 | 3 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0218* | | mg/kg wet | *0.02500* | | *87* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0224* | | mg/kg wet | *0.02500* | | *90* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0193* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **Batch DE40819 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0027

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE40819 - 3540C** | | | | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0183* | | mg/kg wet | *0.02500* | | *73* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0189* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0196* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.3 | 0.05 | mg/kg wet | 0.5000 | | 67 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 73 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.3 | 0.05 | mg/kg wet | 0.5000 | | 64 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0168* | | mg/kg wet | *0.02500* | | *67* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0150* | | mg/kg wet | *0.02500* | | *60* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0174* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0171* | | mg/kg wet | *0.02500* | | *68* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 6 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 74 | 40-140 | 10 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | 10 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 75 | 40-140 | 16 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0178* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0168* | | mg/kg wet | *0.02500* | | *67* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0179* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0177* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| **Batch DE40820 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0027

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE40820 - 3540C** | | | | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0199* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0206* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0184* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.3 | 0.05 | mg/kg wet | 0.5000 | | 58 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.3 | 0.05 | mg/kg wet | 0.5000 | | 58 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 74 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 72 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0182* | | mg/kg wet | *0.02500* | | *73* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.00464* | | mg/kg wet | *0.02500* | | *19* | *30-150* | | | S- |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.00462* | | mg/kg wet | *0.02500* | | *18* | *30-150* | | | S- |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 85 | 40-140 | 38 | 30 | D+ |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 85 | 40-140 | 38 | 30 | D+ |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | 21 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | 22 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0215* | | mg/kg wet | *0.02500* | | *86* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0201* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0209* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0027

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| S- | Surrogate recovery(ies) below lower control limit (S-). |
| D+ | Relative percent difference for duplicate is outside of criteria (D+). |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0027

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0027
Date Received: 5/1/2024
Project Due Date: 5/8/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 5.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 543524 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 543525 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 543526 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 543527 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 543528 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 543529 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 543530 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 8 | 543531 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 9 | 543532 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 10 | 543533 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 11 | 543534 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 12 | 543535 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 13 | 543536 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials (Yes) / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24E0027

Date Received: 5/1/2024

Completed By: _____ Date & Time: 5/1/24 1605

Reviewed By: _____ Date & Time: 5/1/24 1657

# CHAIN OF CUSTODY

ESS Laboratory
*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

ESS Lab # 24E0027

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Reporting Limits | | |

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address | | |
|---|---|---|---|
| Cassia Dal Bello | 31 Bellows Road | | |
| **City** | **State** | **Zip Code** | **PO #** |
| Raynham | MA | 02767 | |
| **Telephone Number** | **FAX Number** | **Email Address** | |
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com | |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | MS/MSD | HOLD |
|---|---|---|---|---|---|---|---|---|
| 1 | 4-30-24 | 1110 | Grab | Soil | BB-6 4-5 | X | | |
| 2 | " | 1125 | Grab | Soil | BB-5 4-5 | X | | |
| 3 | " | 1145 | Grab | Soil | BB-4 4-5 | X | | |
| 4 | " | 1155 | Grab | Soil | BB-3 4-5 | X | | |
| 5 | " | 1310 | Grab | Soil | AA-0 4-5 | X | | |
| — | " | 1310 | Grab | Soil | AA-0 DUP 4-5 | | X | X |
| 6 | " | 1320 | Grab | Soil | AA-1 4-5 | X | | |
| 7 | " | 1345 | Grab | Soil | AA-2 4-5 | X | | |
| — | " | 1345 | Grab | Soil | AA-2 DUP 4-5 | | X | X |
| 8 | " | 1400 | Grab | Soil | AA-4 4-5 | X | | |

**Container Type:** AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — AG
**Container Volume:** 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10
**Preservation Code:** 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1
**Number of Containers per Sample:**

**Laboratory Use Only**
Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 5.1 °C / ice

**Sampled by :** DB and KD

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5/1/24 13:16 | 5/1/24 13:16 | 5/1/24 15:16 | 5/1/24 1516 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
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www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 24E0027

| | | | |
|---|---|---|---|
| Turn Time | 5 | Days | Reporting Limits |
| Regulatory State | Massachusetts | | |

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: PCB | HOLD |
|---|---|---|---|---|---|---|---|
| 9 | 4-30-24 | 1400 | Grab | Soil | AA-4 DUP 1-2 | X | |
| — | | 1400 | Grab | Soil | AA-4 DUP 4-5 | [redacted] | X |
| 10 | | 1410 | Grab | Soil | AA-5 1-2 | X | |
| 11 | | 1410 | Grab | Soil | AA-5 4-5 | X | |
| 12 | | 1420 | Grab | Soil | AA-6 1-2 | X | |
| 13 | | 1420 | Grab | Soil | AA-6 4-5 | X | |
| | | | Grab | Soil | | [redacted] | |
| | | | Grab | Soil | | [redacted] | HOLD |
| | | | Grab | Soil | | [redacted] | |
| | | | Grab | Soil | | [redacted] | |

**Container Type:** AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — AG
**Container Volume:** 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10
**Preservation Code:** 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1
**Number of Containers per Sample:**

**Laboratory Use Only**
Cooler Present: YES ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 5.1 °C / CA

Sampled by : DB and KD

Comments: Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5/1/24 13:16 | 5/1/24 13:16 | 5/1/24 15:16 | 5/1/24 1516 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E0029**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
***By ESS Laboratory at 5:38 pm, May 10, 2024***

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0029

## SAMPLE RECEIPT

The following samples were received on May 01, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E0029-01 | BB-6 1-2 | Soil | 8082A |
| 24E0029-02 | BB-5 1-2 | Soil | 8082A |
| 24E0029-03 | BB-4 1-2 | Soil | 8082A |
| 24E0029-04 | BB-3 1-2 | Soil | 8082A |
| 24E0029-05 | AA-0 1-2 | Soil | 8082A |
| 24E0029-06 | AA-0 DUP 1-2 | Soil | 8082A |
| 24E0029-07 | AA-1 1-2 | Soil | 8082A |
| 24E0029-08 | AA-2 1-2 | Soil | 8082A |
| 24E0029-09 | AA-2 DUP 1-2 | Soil | 8082A |
| 24E0029-10 | AA-4 1-2 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0029

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**

DE40820-BS1 **Surrogate recovery(ies) below lower control limit (S-).**
Tetrachloro-m-xylene (19% @ 30-150%), Tetrachloro-m-xylene [2C] (18% @ 30-150%)

DE40820-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
Aroclor 1016 (38% @ 30%), Aroclor 1016 [2C] (38% @ 30%)

DE40820-MSD2 **Relative percent difference for duplicate is outside of criteria (D+).**
Aroclor 1016 (37% @ 30%), Aroclor 1016 [2C] (33% @ 30%), Aroclor 1260 (41% @ 30%), Aroclor 1260 [2C] (35% @ 30%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0029

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0029

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E0029-01 through 24E0029-10**

Matrices: ( ) Ground Water/Surface Water (X) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (X) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (X) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (X) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (X) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (X) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (X) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (X) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (X)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (X) No ( )* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: May 10, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-6 1-2
Date Sampled: 04/30/24 11:10
Percent Solids: 89
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0029
ESS Laboratory Sample ID: 24E0029-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 21:19 | --- | DE40820 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 21:19 | --- | DE40820 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 21:19 | --- | DE40820 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 21:19 | --- | DE40820 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 21:19 | --- | DE40820 |
| Aroclor 1254 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 21:19 | --- | DE40820 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 21:19 | --- | DE40820 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 21:19 | --- | DE40820 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 21:19 | --- | DE40820 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-5 1-2
Date Sampled: 04/30/24 11:25
Percent Solids: 94
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0029
ESS Laboratory Sample ID: 24E0029-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 21:38 | --- | DE40820 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 21:38 | --- | DE40820 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 21:38 | --- | DE40820 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 21:38 | --- | DE40820 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 21:38 | --- | DE40820 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/09/24 21:38 | --- | DE40820 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 21:38 | --- | DE40820 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 21:38 | --- | DE40820 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 21:38 | --- | DE40820 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *81 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-4 1-2
Date Sampled: 04/30/24 11:45
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0029
ESS Laboratory Sample ID: 24E0029-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 21:58 | --- | DE40820 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 21:58 | --- | DE40820 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 21:58 | --- | DE40820 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 21:58 | --- | DE40820 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 21:58 | --- | DE40820 |
| **Aroclor 1254 [2C]** | **0.08** (0.06) | --- | 8082A | --- | 1 | 05/09/24 21:58 | --- | DE40820 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 21:58 | --- | DE40820 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 21:58 | --- | DE40820 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/09/24 21:58 | --- | DE40820 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-3 1-2
Date Sampled: 04/30/24 11:55
Percent Solids: 93
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0029
ESS Laboratory Sample ID: 24E0029-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:18 | --- | DE40820 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:18 | --- | DE40820 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:18 | --- | DE40820 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:18 | --- | DE40820 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:18 | --- | DE40820 |
| **Aroclor 1254 [2C]** | **0.4** (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:18 | --- | DE40820 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:18 | --- | DE40820 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:18 | --- | DE40820 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:18 | --- | DE40820 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *89 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *94 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-0 1-2
Date Sampled: 04/30/24 13:10
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0029
ESS Laboratory Sample ID: 24E0029-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:38 | --- | DE40820 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:38 | --- | DE40820 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:38 | --- | DE40820 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:38 | --- | DE40820 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:38 | --- | DE40820 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:38 | --- | DE40820 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:38 | --- | DE40820 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:38 | --- | DE40820 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:38 | --- | DE40820 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *87 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *87 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-0 DUP 1-2
Date Sampled: 04/30/24 13:10
Percent Solids: 92
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0029
ESS Laboratory Sample ID: 24E0029-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:58 | --- | DE40820 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:58 | --- | DE40820 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:58 | --- | DE40820 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:58 | --- | DE40820 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:58 | --- | DE40820 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:58 | --- | DE40820 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:58 | --- | DE40820 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:58 | --- | DE40820 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/09/24 22:58 | --- | DE40820 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *90 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *88 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-1 1-2
Date Sampled: 04/30/24 13:20
Percent Solids: 93
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0029
ESS Laboratory Sample ID: 24E0029-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 1:56 | --- | DE40820 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 1:56 | --- | DE40820 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 1:56 | --- | DE40820 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 1:56 | --- | DE40820 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 1:56 | --- | DE40820 |
| Aroclor 1254 [2C] | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 1:56 | --- | DE40820 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 1:56 | --- | DE40820 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 1:56 | --- | DE40820 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 1:56 | --- | DE40820 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *92 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *87 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-2 1-2
Date Sampled: 04/30/24 13:45
Percent Solids: 93
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0029
ESS Laboratory Sample ID: 24E0029-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 2:16 | --- | DE40820 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 2:16 | --- | DE40820 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 2:16 | --- | DE40820 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 2:16 | --- | DE40820 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 2:16 | --- | DE40820 |
| **Aroclor 1254 [2C]** | **1.4** (0.1) | --- | 8082A | --- | 2 | 05/10/24 13:45 | --- | DE40820 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 2:16 | --- | DE40820 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 2:16 | --- | DE40820 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 2:16 | --- | DE40820 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *87 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *69 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-2 DUP 1-2
Date Sampled: 04/30/24 13:45
Percent Solids: 91
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0029
ESS Laboratory Sample ID: 24E0029-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 2:36 | --- | DE40820 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 2:36 | --- | DE40820 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 2:36 | --- | DE40820 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 2:36 | --- | DE40820 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 2:36 | --- | DE40820 |
| **Aroclor 1254 [2C]** | **0.6** (0.06) | --- | 8082A | --- | 1 | 05/10/24 2:36 | --- | DE40820 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 2:36 | --- | DE40820 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 2:36 | --- | DE40820 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 2:36 | --- | DE40820 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *87 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *85 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-4 1-2
Date Sampled: 04/30/24 14:00
Percent Solids: 93
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0029
ESS Laboratory Sample ID: 24E0029-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/8/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 3:35 | --- | DE40820 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 3:35 | --- | DE40820 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 3:35 | --- | DE40820 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 3:35 | --- | DE40820 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 3:35 | --- | DE40820 |
| **Aroclor 1254 [2C]** | **0.6** (0.05) | --- | 8082A | --- | 1 | 05/10/24 3:35 | --- | DE40820 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 3:35 | --- | DE40820 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 3:35 | --- | DE40820 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 3:35 | --- | DE40820 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0029

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE40820 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0199* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0206* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0184* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.3 | 0.05 | mg/kg wet | 0.5000 | | 58 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.3 | 0.05 | mg/kg wet | 0.5000 | | 58 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 74 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 72 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0182* | | mg/kg wet | *0.02500* | | *73* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.00464* | | mg/kg wet | *0.02500* | | *19* | *30-150* | | | S- |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.00462* | | mg/kg wet | *0.02500* | | *18* | *30-150* | | | S- |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 85 | 40-140 | 38 | 30 | D+ |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 85 | 40-140 | 38 | 30 | D+ |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | 21 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | 22 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0215* | | mg/kg wet | *0.02500* | | *86* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0201* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0209* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| **Matrix Spike Source: 24E0029-06** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg dry | 0.5373 | ND | 85 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg dry | 0.5373 | ND | 88 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0029

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE40820 - 3540C** | | | | | | | | | | |
| Aroclor 1260 | 0.6 | 0.05 | mg/kg dry | 0.5373 | ND | 109 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.6 | 0.05 | mg/kg dry | 0.5373 | ND | 109 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0219* | | mg/kg dry | *0.02687* | | *82* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0236* | | mg/kg dry | *0.02687* | | *88* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0221* | | mg/kg dry | *0.02687* | | *82* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0234* | | mg/kg dry | *0.02687* | | *87* | *30-150* | | | |
| **Matrix Spike Source: 24E0029-09** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg dry | 0.5479 | ND | 91 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg dry | 0.5479 | ND | 93 | 40-140 | | | |
| Aroclor 1260 | 0.7 | 0.05 | mg/kg dry | 0.5479 | ND | 133 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.6 | 0.05 | mg/kg dry | 0.5479 | ND | 115 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0213* | | mg/kg dry | *0.02739* | | *78* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0236* | | mg/kg dry | *0.02739* | | *86* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0222* | | mg/kg dry | *0.02739* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0233* | | mg/kg dry | *0.02739* | | *85* | *30-150* | | | |
| **Matrix Spike Dup Source: 24E0029-06** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg dry | 0.5320 | ND | 91 | 40-140 | 5 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg dry | 0.5320 | ND | 94 | 40-140 | 6 | 30 | |
| Aroclor 1260 | 0.6 | 0.05 | mg/kg dry | 0.5320 | ND | 118 | 40-140 | 7 | 30 | |
| Aroclor 1260 [2C] | 0.6 | 0.05 | mg/kg dry | 0.5320 | ND | 118 | 40-140 | 7 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0227* | | mg/kg dry | *0.02660* | | *85* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0247* | | mg/kg dry | *0.02660* | | *93* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0230* | | mg/kg dry | *0.02660* | | *87* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0244* | | mg/kg dry | *0.02660* | | *92* | *30-150* | | | |
| **Matrix Spike Dup Source: 24E0029-09** | | | | | | | | | | |
| Aroclor 1016 | 0.3 | 0.06 | mg/kg dry | 0.5590 | ND | 62 | 40-140 | 37 | 30 | D+ |
| Aroclor 1016 [2C] | 0.4 | 0.06 | mg/kg dry | 0.5590 | ND | 65 | 40-140 | 33 | 30 | D+ |
| Aroclor 1260 | 0.5 | 0.06 | mg/kg dry | 0.5590 | ND | 87 | 40-140 | 41 | 30 | D+ |
| Aroclor 1260 [2C] | 0.4 | 0.06 | mg/kg dry | 0.5590 | ND | 79 | 40-140 | 35 | 30 | D+ |
| *Surrogate: Decachlorobiphenyl* | *0.0175* | | mg/kg dry | *0.02795* | | *63* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0191* | | mg/kg dry | *0.02795* | | *68* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0146* | | mg/kg dry | *0.02795* | | *52* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0153* | | mg/kg dry | *0.02795* | | *55* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0029

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| S- | Surrogate recovery(ies) below lower control limit (S-). |
| D+ | Relative percent difference for duplicate is outside of criteria (D+). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0029

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0029
Date Received: 5/1/2024
Project Due Date: 5/8/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 5.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 543511 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 543512 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 543513 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 543514 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 543515 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 543516 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 543517 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 8 | 543518 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 9 | 543519 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 10 | 543520 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials MC (Yes) / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? (Yes) / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted?

Completed By: Date & Time: 5/1/24 1605

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24E0029

Date Received: 5/1/2024

Reviewed By: Taylor Davis

Date & Time: 5/1/24 1656

ESS Laboratory
*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 24E0029

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Reporting Limits | | |

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | MS/MSD |
|---|---|---|---|---|---|---|---|
| 1 | 4-30-24 | 1110 | Grab | Soil | BB-6 1-2 | X | |
| 2 | " | 1125 | Grab | Soil | BB-5 1-2 | X | |
| 3 | " | 1145 | Grab | Soil | BB-4 1-2 | X | |
| 4 | " | 1155 | Grab | Soil | BB-3 1-2 | X | |
| 5 | " | 1310 | Grab | Soil | AA-0 1-2 | X | |
| 6 | " | 1310 | Grab | Soil | AA-0 DUP 1-2 | X | X |
| 7 | " | 1320 | Grab | Soil | AA-1 1-2 | X | |
| 8 | " | 1345 | Grab | Soil | AA-2 1-2 | X | |
| 9 | " | 1345 | Grab | Soil | AA-2 DUP 1-2 | X | X |
| 10 | " | 1400 | Grab | Soil | AA-4 1-2 | X | |

**Container Type:** AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — AG
**Container Volume:** 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10
**Preservation Code:** 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1
**Number of Containers per Sample:**

**Laboratory Use Only**
Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 5.1 °C IR

Sampled by : DB and KD

Comments: Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5/1/24 13:16 | 5/1/24 13:16 | 5/1/24 15:16 | 5/1/24 1516 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E0050**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 5:06 pm, May 13, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

## SAMPLE RECEIPT

The following samples were received on May 02, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Low Level VOA vials were frozen by ESS Laboratory on 5/02/24 at 17:17.**
**Tetrahydrofuran is reported above the MA CAM reporting limit of 0.010 mg/kg.**

**Question I: All samples for EPH and Metals were analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E0050-01 | A-5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0050-02 | A-3 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0050-03 | A-1 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0050-04 | I-3 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0050-05 | A-7 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

| | | | |
|---|---|---|---|
| 24E0050-06 | G-3 0-4 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0050-07 | G-3 4-8 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0050-08 | CO 1-2 | Soil | 8082A |
| 24E0050-09 | CO 4-5 | Soil | 8082A |
| 24E0050-10 | CO DUP 1-2 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

## PROJECT NARRATIVE

**8081B Organochlorine Pesticides**

| | |
|---|---|
| 24E0050-02 | **Lower value is used due to matrix interferences (LC).** |
| | Dieldrin [2C] |
| 24E0050-02 | **Percent difference between primary and confirmation results exceeds 40% (P).** |
| | Dieldrin [2C] |

**8151A Chlorinated Herbicides**

| | |
|---|---|
| 24E0050-01 | **Modified result** |
| | MCPP |
| 24E0050-01 | **Peaks found in the retention time window for MCPP did not confirm by GC/MS.** |
| 24E0050-02 | **Modified result** |
| | MCPP |
| 24E0050-02 | **Peaks found in the retention time window for MCPP did not confirm by GC/MS.** |
| 24E0050-05 | **Modified result** |
| | MCPP |
| 24E0050-05 | **Peaks found in the retention time window for MCPP did not confirm by GC/MS.** |
| 24E0050-07 | **Modified result** |
| | MCPP |
| 24E0050-07 | **Peaks found in the retention time window for MCPP did not confirm by GC/MS.** |

**Semi-Volatile Organic Compounds**

| | |
|---|---|
| 24E0050-01 | **Surrogate recovery(ies) above upper control limit (S+).** |
| | p-Terphenyl-d14 (132% @ 30-130%) |
| 24E0050-06 | **Surrogate recovery(ies) above upper control limit (S+).** |
| | p-Terphenyl-d14 (136% @ 30-130%) |
| D4E0046-CCV1 | **Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration** |
| | 2,4-Dimethylphenol (108% @ 80-120%) |
| D4E0046-CCV1 | **Calibration required quadratic regression (Q).** |
| | 2,4-Dinitrophenol (69% @ 40-160%), Di-n-octylphthalate (99% @ 80-120%) |
| D4E0046-CCV1 | **Continuing Calibration %Diff/Drift is above control limit (CD+).** |
| | Benzo(g,h,i)perylene (23% @ 20%), Indeno(1,2,3-cd)Pyrene (25% @ 20%) |
| D4E0046-CCV1 | **Initial Calibration Verification recovery is above upper control limit (ICV+).** |
| | 2,4-Dimethylphenol |
| D4E0076-CCV1 | **Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration** |
| | 2,4-Dimethylphenol (111% @ 80-120%) |
| D4E0076-CCV1 | **Calibration required quadratic regression (Q).** |
| | 2,4-Dinitrophenol (78% @ 40-160%), Di-n-octylphthalate (124% @ 80-120%) |
| D4E0076-CCV1 | **Continuing Calibration %Diff/Drift is above control limit (CD+).** |
| | Di-n-octylphthalate (24% @ 20%) |
| D4E0076-CCV1 | **Initial Calibration Verification recovery is above upper control limit (ICV+).** |
| | 2,4-Dimethylphenol |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

DE40208-BS1 **Blank Spike recovery is above upper control limit (B+).**
2,4-Dimethylphenol (143% @ 30-130%)

DE40208-BSD1 **Blank Spike recovery is above upper control limit (B+).**
2,4-Dimethylphenol (143% @ 30-130%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E0050-01 through 24E0050-10**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| (x) 8260 VOC CAM II A | (x) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| (x) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | (x) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | (x) MassDEP EPH CAM IV B | (x) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes (x) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? ***Data User Note:*** ***Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*** | Yes ( ) No (x)* |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (x)* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: May 13, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.93** (0.76) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:52 | 2.87 | 100 | DE40304 |
| **Barium** | **21.0** (0.76) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:52 | 2.87 | 100 | DE40304 |
| Cadmium | ND (0.38) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:52 | 2.87 | 100 | DE40304 |
| **Chromium** | **8.58** (0.76) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:52 | 2.87 | 100 | DE40304 |
| **Lead** | **72.7** (3.79) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:52 | 2.87 | 100 | DE40304 |
| **Mercury** | **0.150** (0.034) | --- | 7471B | --- | 1 | AFV | 05/03/24 16:52 | 0.63 | 40 | DE40305 |
| Selenium | ND (3.79) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:52 | 2.87 | 100 | DE40304 |
| Silver | ND (0.38) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:52 | 2.87 | 100 | DE40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,1,1-Trichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,1,2,2-Tetrachloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,1,2-Trichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,1-Dichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,1-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,1-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,2,3-Trichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,2,3-Trichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,2,4-Trichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,2,4-Trimethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,2-Dibromoethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,2-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,2-Dichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,2-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,3,5-Trimethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,3-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,3-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,4-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,4-Dioxane | ND (0.0954) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 2,2-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 2-Butanone | ND (0.0477) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 2-Chlorotoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 2-Hexanone | ND (0.0477) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 4-Chlorotoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 4-Isopropyltoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0477) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Acetone | ND (0.0477) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Benzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Bromobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Bromochloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Bromodichloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Bromoform | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Bromomethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Carbon Disulfide | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Carbon Tetrachloride | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Chlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Chloroethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Chloroform | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Chloromethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| cis-1,2-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| cis-1,3-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Dibromochloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Dibromomethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Dichlorodifluoromethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Diethyl Ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Di-isopropyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Ethyl tertiary-butyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Ethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Hexachlorobutadiene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Isopropylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Methyl tert-Butyl Ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Methylene Chloride | ND (0.0238) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| n-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| n-Propylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| sec-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Styrene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| tert-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Tertiary-amyl methyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Tetrachloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Tetrahydrofuran | ND (0.0191) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Toluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| trans-1,2-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| trans-1,3-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Trichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Trichlorofluoromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Vinyl Chloride | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Xylene O | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Xylene P,M | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Xylenes (Total) | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *105 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *95 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *101 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 1,2,4-Trichlorobenzene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 1,2-Dichlorobenzene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 1,3-Dichlorobenzene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 1,4-Dichlorobenzene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2,4,5-Trichlorophenol | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2,4,6-Trichlorophenol | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2,4-Dichlorophenol | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2,4-Dimethylphenol | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2,4-Dinitrophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2,4-Dinitrotoluene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2,6-Dinitrotoluene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2-Chloronaphthalene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2-Chlorophenol | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2-Methylnaphthalene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2-Methylphenol | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2-Nitrophenol | ND (0.561) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 3,3´-Dichlorobenzidine | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 3+4-Methylphenol | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 4-Bromophenyl-phenylether | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 4-Chloroaniline | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 4-Nitrophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Acenaphthene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Acenaphthylene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Acetophenone | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Aniline | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Anthracene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Benzo(a)anthracene** | **0.514** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Benzo(a)pyrene** | **0.523** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Benzo(b)fluoranthene** | **0.385** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Benzo(g,h,i)perylene** | **0.371** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Benzo(k)fluoranthene** | **0.318** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| bis(2-Chloroethoxy)methane | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| bis(2-Chloroethyl)ether | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| bis(2-chloroisopropyl)Ether | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| bis(2-Ethylhexyl)phthalate | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Butylbenzylphthalate | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Chrysene** | **0.482** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Dibenzo(a,h)Anthracene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Dibenzofuran | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Diethylphthalate | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Dimethylphthalate | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Di-n-butylphthalate | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Di-n-octylphthalate | ND (0.561) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Fluoranthene** | **0.920** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Fluorene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Hexachlorobenzene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Hexachlorobutadiene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Hexachloroethane | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Indeno(1,2,3-cd)Pyrene** | **0.340** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Isophorone | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Naphthalene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Nitrobenzene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Pentachlorophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Phenanthrene** | **0.583** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Phenol | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Pyrene** | **1.07** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Pyridine | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *91 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *114 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *95 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *102 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *97 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *102 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *95 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *132 %* | *S+* | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 17:45 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 17:45 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 17:45 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 17:45 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 17:45 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/10/24 17:45 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 17:45 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 17:45 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 17:45 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *76 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *69 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 19.8g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 19:35

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| beta-BHC [2C] | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Chlordane (Total) | ND (0.0220) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| **Dieldrin [2C]** | **0.0067** (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Toxaphene | ND (0.137) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *108 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *89 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |
| 2,4-D | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |
| Dalapon | ND (0.048) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |
| MCPA | ND (2.45) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |
| MCPP | # ND (2.48) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *90 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/2/24 18:46

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **39.1** (11.2) | --- | 8100M | --- | 1 | 05/03/24 16:49 | --- | DE40151 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *81 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 141** (5) | --- | 9050A | --- | 1 | LAB | 05/03/24 10:30 | umhos/cm | DE40323 |
| **Corrosivity (pH)** | **8.34** (N/A) | --- | 9045 | --- | 1 | CCP | 05/02/24 19:51 | S.U. | DE40237 |
| **Corrosivity (pH) Sample Temp** | **20.2** | --- | 2550B | --- | 1 | CCP | 05/02/24 19:51 | °C | DE40237 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | JLK | 05/02/24 19:29 | °F | DE40231 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/02/24 20:52 | ml/5 min | DE40257 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.04** (0.82) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:54 | 2.66 | 100 | DE40304 |
| **Barium** | **63.4** (0.82) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:54 | 2.66 | 100 | DE40304 |
| **Cadmium** | **0.52** (0.41) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:54 | 2.66 | 100 | DE40304 |
| **Chromium** | **24.2** (0.82) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:54 | 2.66 | 100 | DE40304 |
| **Lead** | **164** (4.12) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:54 | 2.66 | 100 | DE40304 |
| **Mercury** | **0.118** (0.035) | --- | 7471B | --- | 1 | AFV | 05/03/24 16:54 | 0.62 | 40 | DE40305 |
| Selenium | ND (4.12) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:54 | 2.66 | 100 | DE40304 |
| Silver | ND (0.41) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:54 | 2.66 | 100 | DE40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.94** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/07/24 21:54 | 50 50 | DE40722 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,1,1-Trichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,1,2,2-Tetrachloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,1,2-Trichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,1-Dichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,1-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,1-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,2,3-Trichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,2,3-Trichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,2,4-Trichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,2,4-Trimethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,2-Dibromoethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,2-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,2-Dichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,2-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,3,5-Trimethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,3-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,3-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,4-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,4-Dioxane | ND (0.0962) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 2,2-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 2-Butanone | ND (0.0481) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 2-Chlorotoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 2-Hexanone | ND (0.0481) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 4-Chlorotoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 4-Isopropyltoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0481) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Acetone | ND (0.0481) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Benzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Bromobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Bromochloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Bromodichloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Bromoform | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Bromomethane | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Carbon Disulfide | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Carbon Tetrachloride | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Chlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Chloroethane | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Chloroform | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Chloromethane | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| cis-1,2-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| cis-1,3-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Dibromochloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Dibromomethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Dichlorodifluoromethane | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Diethyl Ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Di-isopropyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Ethyl tertiary-butyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Ethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Hexachlorobutadiene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Isopropylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Methyl tert-Butyl Ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Methylene Chloride | ND (0.0240) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| n-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| n-Propylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| sec-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Styrene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| tert-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Tertiary-amyl methyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Tetrachloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Tetrahydrofuran | ND (0.0192) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Toluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| trans-1,2-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| trans-1,3-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Trichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Trichlorofluoromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Vinyl Chloride | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Xylene O | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Xylene P,M | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Xylenes (Total) | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *109 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *100 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *103 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 1,2,4-Trichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 1,2-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 1,3-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 1,4-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2,4,5-Trichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2,4,6-Trichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2,4-Dichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2,4-Dimethylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2,4-Dinitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2,4-Dinitrotoluene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2,6-Dinitrotoluene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2-Chloronaphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2-Chlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2-Methylnaphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2-Methylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2-Nitrophenol | ND (0.554) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 3,3´-Dichlorobenzidine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 3+4-Methylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 4-Bromophenyl-phenylether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 4-Chloroaniline | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 4-Nitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Acenaphthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Acenaphthylene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Acetophenone | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Aniline | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Anthracene** | **1.41** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Benzo(a)anthracene** | **7.33** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Benzo(a)pyrene** | **7.30** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Benzo(b)fluoranthene** | **6.25** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Benzo(g,h,i)perylene** | **4.44** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Benzo(k)fluoranthene** | **4.84** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| bis(2-Chloroethoxy)methane | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| bis(2-Chloroethyl)ether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| bis(2-chloroisopropyl)Ether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| bis(2-Ethylhexyl)phthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Butylbenzylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Chrysene** | **6.28** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Dibenzo(a,h)Anthracene** | **1.28** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Dibenzofuran | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Diethylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Dimethylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Di-n-butylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Di-n-octylphthalate | ND (0.554) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Fluoranthene** | **10.0** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Fluorene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Hexachlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Hexachlorobutadiene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Hexachloroethane | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Indeno(1,2,3-cd)Pyrene** | **5.31** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Isophorone | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Naphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Nitrobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Pentachlorophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Phenanthrene** | **3.82** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Phenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Pyrene** | **9.49** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Pyridine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *97 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *114 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *105 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *110 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *106 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *109 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *105 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *129 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 18:04 | --- | DE40918 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 18:04 | --- | DE40918 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 18:04 | --- | DE40918 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 18:04 | --- | DE40918 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 18:04 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.3** (0.06) | --- | 8082A | --- | 1 | 05/10/24 18:04 | --- | DE40918 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 18:04 | --- | DE40918 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 18:04 | --- | DE40918 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 18:04 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 20.1g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 19:35

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| beta-BHC [2C] | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Chlordane (Total) | ND (0.0218) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| **Dieldrin [2C]** | **P, LC 0.0027** (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Toxaphene | ND (0.136) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *94 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 10.4g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |
| 2,4-D | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |
| Dalapon | ND (0.048) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |
| MCPA | ND (2.45) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |
| MCPP | # ND (2.48) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/2/24 18:46

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **36.2** (10.9) | --- | 8100M | --- | 1 | 05/03/24 17:27 | --- | DE40151 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *87 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 134** (5) | --- | 9050A | --- | 1 | LAB | 05/03/24 10:30 | umhos/cm | DE40323 |
| **Corrosivity (pH)** | **8.08** (N/A) | --- | 9045 | --- | 1 | CCP | 05/02/24 19:51 | S.U. | DE40237 |
| **Corrosivity (pH) Sample Temp** | **20.1** | --- | 2550B | --- | 1 | CCP | 05/02/24 19:51 | °C | DE40237 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | JLK | 05/02/24 19:29 | °F | DE40231 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/02/24 20:52 | ml/5 min | DE40257 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/6/24 18:02

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **19.6** (N/A) | --- | 1311 | --- | 1 | RAP | 05/07/24 10:04 | 100 2000 | DE40669 |
| **Temperature (Max C)** | **22.1** (N/A) | --- | 1311 | --- | 1 | RAP | 05/07/24 10:04 | 100 2000 | DE40669 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | --- | | | | 100 2000 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.52** (0.82) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:56 | 2.69 | 100 | DE40304 |
| **Barium** | **10.6** (0.82) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:56 | 2.69 | 100 | DE40304 |
| Cadmium | ND (0.41) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:56 | 2.69 | 100 | DE40304 |
| **Chromium** | **7.77** (0.82) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:56 | 2.69 | 100 | DE40304 |
| **Lead** | **15.8** (4.09) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:56 | 2.69 | 100 | DE40304 |
| **Mercury** | **0.060** (0.036) | --- | 7471B | --- | 1 | AFV | 05/03/24 16:56 | 0.61 | 40 | DE40305 |
| Selenium | ND (4.09) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:56 | 2.69 | 100 | DE40304 |
| Silver | ND (0.41) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:56 | 2.69 | 100 | DE40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 6.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,1,1-Trichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,1,2,2-Tetrachloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,1,2-Trichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,1-Dichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,1-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,1-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,2,3-Trichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,2,3-Trichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,2,4-Trichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,2,4-Trimethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,2-Dibromoethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,2-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,2-Dichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,2-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,3,5-Trimethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,3-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,3-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,4-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,4-Dioxane | ND (0.0859) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 2,2-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 2-Butanone | ND (0.0430) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 2-Chlorotoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 2-Hexanone | ND (0.0430) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 4-Chlorotoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 4-Isopropyltoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 6.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0430) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Acetone | ND (0.0430) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Benzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Bromobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Bromochloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Bromodichloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Bromoform | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Bromomethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Carbon Disulfide | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Carbon Tetrachloride | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Chlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Chloroethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Chloroform | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Chloromethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| cis-1,2-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| cis-1,3-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Dibromochloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Dibromomethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Dichlorodifluoromethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Diethyl Ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Di-isopropyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Ethyl tertiary-butyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Ethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Hexachlorobutadiene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Isopropylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Methyl tert-Butyl Ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Methylene Chloride | ND (0.0215) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 6.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| n-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| n-Propylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| sec-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Styrene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| tert-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Tertiary-amyl methyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Tetrachloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Tetrahydrofuran | ND (0.0172) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Toluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| trans-1,2-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| trans-1,3-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Trichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Trichlorofluoromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Vinyl Chloride | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Xylene O | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Xylene P,M | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Xylenes (Total) | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *106 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *96 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *100 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.029) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 1,2,4-Trichlorobenzene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 1,2-Dichlorobenzene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 1,3-Dichlorobenzene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 1,4-Dichlorobenzene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2,4,5-Trichlorophenol | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2,4,6-Trichlorophenol | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2,4-Dichlorophenol | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2,4-Dimethylphenol | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2,4-Dinitrophenol | ND (1.15) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2,4-Dinitrotoluene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2,6-Dinitrotoluene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2-Chloronaphthalene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2-Chlorophenol | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2-Methylnaphthalene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2-Methylphenol | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2-Nitrophenol | ND (0.573) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 3,3´-Dichlorobenzidine | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 3+4-Methylphenol | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 4-Bromophenyl-phenylether | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 4-Chloroaniline | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 4-Nitrophenol | ND (1.15) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Acenaphthene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Acenaphthylene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Acetophenone | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Aniline | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Anthracene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| **Benzo(a)anthracene** | **0.332** (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| **Benzo(a)pyrene** | **0.352** (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Benzo(b)fluoranthene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| **Benzo(g,h,i)perylene** | **0.449** (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Benzo(k)fluoranthene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| bis(2-Chloroethoxy)methane | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| bis(2-Chloroethyl)ether | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| bis(2-chloroisopropyl)Ether | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| bis(2-Ethylhexyl)phthalate | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Butylbenzylphthalate | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| **Chrysene** | **0.311** (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Dibenzo(a,h)Anthracene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Dibenzofuran | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Diethylphthalate | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Dimethylphthalate | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Di-n-butylphthalate | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Di-n-octylphthalate | ND (0.573) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| **Fluoranthene** | **0.693** (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Fluorene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Hexachlorobenzene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Hexachlorobutadiene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Hexachloroethane | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Indeno(1,2,3-cd)Pyrene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Isophorone | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Naphthalene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Nitrobenzene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Pentachlorophenol | ND (1.15) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| **Phenanthrene** | **0.372** (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Phenol | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| **Pyrene** | **0.638** (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Pyridine | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *100 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *120 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *107 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *114 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *109 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *111 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *108 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *129 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:24 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:24 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:24 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:24 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:24 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:24 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:24 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:24 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:24 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *76 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 19:35

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| 4,4´-DDE | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| 4,4´-DDT | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Aldrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| alpha-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| alpha-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| beta-BHC [2C] | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Chlordane (Total) | ND (0.0222) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| delta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Dieldrin [2C] | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Endosulfan I | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Endosulfan II | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Endosulfan Sulfate | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Endrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Endrin Ketone | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| gamma-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Heptachlor | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Heptachlor Epoxide | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Hexachlorobenzene | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Methoxychlor | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Toxaphene | ND (0.139) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *107 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *91 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |
| 2,4-D | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |
| Dalapon | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |
| Dinoseb | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |
| MCPA | ND (2.48) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |
| MCPP | ND (2.51) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *86 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/2/24 18:46

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **31.3** (11.1) | --- | 8100M | --- | 1 | 05/03/24 18:06 | --- | DE40151 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *83 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 50** (5) | --- | 9050A | --- | 1 | LAB | 05/03/24 10:30 | umhos/cm | DE40323 |
| **Corrosivity (pH)** | **7.90** (N/A) | --- | 9045 | --- | 1 | CCP | 05/02/24 19:51 | S.U. | DE40237 |
| **Corrosivity (pH) Sample Temp** | **20.2** | --- | 2550B | --- | 1 | CCP | 05/02/24 19:51 | °C | DE40237 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | JLK | 05/02/24 19:29 | °F | DE40231 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/02/24 20:52 | ml/5 min | DE40257 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.58** (0.72) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:58 | 2.99 | 100 | DE40304 |
| **Barium** | **35.2** (0.72) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:58 | 2.99 | 100 | DE40304 |
| Cadmium | ND (0.36) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:58 | 2.99 | 100 | DE40304 |
| **Chromium** | **7.10** (0.72) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:58 | 2.99 | 100 | DE40304 |
| **Lead** | **34.0** (3.59) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:58 | 2.99 | 100 | DE40304 |
| **Mercury** | **0.079** (0.031) | --- | 7471B | --- | 1 | AFV | 05/03/24 16:58 | 0.68 | 40 | DE40305 |
| Selenium | ND (3.59) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:58 | 2.99 | 100 | DE40304 |
| Silver | ND (0.36) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:58 | 2.99 | 100 | DE40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,1,1-Trichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,1,2,2-Tetrachloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,1,2-Trichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,1-Dichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,1-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,1-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,2,3-Trichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,2,3-Trichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,2,4-Trichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,2,4-Trimethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,2-Dibromoethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,2-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,2-Dichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,2-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,3,5-Trimethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,3-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,3-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,4-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,4-Dioxane | ND (0.0925) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 2,2-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 2-Butanone | ND (0.0463) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 2-Chlorotoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 2-Hexanone | ND (0.0463) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 4-Chlorotoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 4-Isopropyltoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0463) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Acetone | ND (0.0463) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Benzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Bromobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Bromochloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Bromodichloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Bromoform | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Bromomethane | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Carbon Disulfide | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Carbon Tetrachloride | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Chlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Chloroethane | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Chloroform | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Chloromethane | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| cis-1,2-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| cis-1,3-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Dibromochloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Dibromomethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Dichlorodifluoromethane | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Diethyl Ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Di-isopropyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Ethyl tertiary-butyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Ethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Hexachlorobutadiene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Isopropylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Methyl tert-Butyl Ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Methylene Chloride | ND (0.0231) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| n-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| n-Propylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| sec-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Styrene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| tert-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Tertiary-amyl methyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Tetrachloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Tetrahydrofuran | ND (0.0185) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Toluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| trans-1,2-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| trans-1,3-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Trichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Trichlorofluoromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Vinyl Chloride | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Xylene O | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Xylene P,M | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Xylenes (Total) | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *108 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *97 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *101 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 1,2,4-Trichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 1,2-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 1,3-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 1,4-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2,4,5-Trichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2,4,6-Trichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2,4-Dichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2,4-Dimethylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2,4-Dinitrophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2,4-Dinitrotoluene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2,6-Dinitrotoluene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2-Chloronaphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2-Chlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2-Methylnaphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2-Methylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2-Nitrophenol | ND (0.542) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 3,3´-Dichlorobenzidine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 3+4-Methylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 4-Bromophenyl-phenylether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 4-Chloroaniline | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 4-Nitrophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Acenaphthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Acenaphthylene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Acetophenone | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Aniline | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Benzo(a)anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Benzo(a)pyrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Benzo(b)fluoranthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Benzo(g,h,i)perylene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Benzo(k)fluoranthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| bis(2-Chloroethoxy)methane | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| bis(2-Chloroethyl)ether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| bis(2-chloroisopropyl)Ether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| bis(2-Ethylhexyl)phthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Butylbenzylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Chrysene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Dibenzo(a,h)Anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Dibenzofuran | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Diethylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Dimethylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Di-n-butylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Di-n-octylphthalate | ND (0.542) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| **Fluoranthene** | **0.414** (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Fluorene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Hexachlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Hexachlorobutadiene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Hexachloroethane | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Indeno(1,2,3-cd)Pyrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Isophorone | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Naphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Nitrobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Pentachlorophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Phenanthrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Phenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| **Pyrene** | **0.442** (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Pyridine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *86 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *110 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *88 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *100 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *90 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *94 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *90 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *123 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:43 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:43 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:43 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:43 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:43 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:43 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:43 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:43 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:43 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *77 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 20.4g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 19:35

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| 4,4´-DDE | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| 4,4´-DDT | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Aldrin | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| alpha-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| alpha-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| beta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Chlordane (Total) | ND (0.0210) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| delta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Dieldrin [2C] | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Endosulfan I | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Endosulfan II | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Endosulfan Sulfate | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Endrin | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Endrin Ketone | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| gamma-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Heptachlor | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Heptachlor Epoxide | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Hexachlorobenzene | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Methoxychlor | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Toxaphene | ND (0.132) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *92 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *86 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 10g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |
| 2,4-D | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |
| Dalapon | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |
| Dinoseb | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |
| MCPA | ND (2.50) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |
| MCPP | ND (2.52) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *87 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/2/24 20:01

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **73.8** (10.7) | --- | 8100M | --- | 1 | 05/03/24 18:44 | --- | DE40243 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *84 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 473** (5) | --- | 9050A | --- | 1 | LAB | 05/03/24 10:30 | umhos/cm | DE40323 |
| **Corrosivity (pH)** | **7.96** (N/A) | --- | 9045 | --- | 1 | CCP | 05/02/24 19:51 | S.U. | DE40237 |
| **Corrosivity (pH) Sample Temp** | **20.3** | --- | 2550B | --- | 1 | CCP | 05/02/24 19:51 | °C | DE40237 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | JLK | 05/02/24 19:29 | °F | DE40231 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/02/24 20:59 | ml/5 min | DE40257 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.20** (0.83) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:00 | 2.7 | 100 | DE40304 |
| **Barium** | **37.5** (0.83) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:00 | 2.7 | 100 | DE40304 |
| Cadmium | ND (0.42) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:00 | 2.7 | 100 | DE40304 |
| **Chromium** | **7.62** (0.83) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:00 | 2.7 | 100 | DE40304 |
| **Lead** | **105** (4.17) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:00 | 2.7 | 100 | DE40304 |
| **Mercury** | **0.441** (0.033) | --- | 7471B | --- | 1 | AFV | 05/03/24 17:00 | 0.68 | 40 | DE40305 |
| Selenium | ND (4.17) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:00 | 2.7 | 100 | DE40304 |
| Silver | ND (0.42) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:00 | 2.7 | 100 | DE40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **1.12** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/07/24 21:57 | 50 50 | DE40722 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 4.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,1,1-Trichloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,1,2,2-Tetrachloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,1,2-Trichloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,1-Dichloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,1-Dichloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,1-Dichloropropene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,2,3-Trichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,2,3-Trichloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,2,4-Trichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,2,4-Trimethylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,2-Dibromoethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,2-Dichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,2-Dichloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,2-Dichloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,3,5-Trimethylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,3-Dichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,3-Dichloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,4-Dichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,4-Dioxane | ND (0.120) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 2,2-Dichloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 2-Butanone | ND (0.0599) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 2-Chlorotoluene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 2-Hexanone | ND (0.0599) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 4-Chlorotoluene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 4-Isopropyltoluene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 4.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0599) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Acetone | ND (0.0599) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Benzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Bromobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Bromochloromethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Bromodichloromethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Bromoform | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Bromomethane | ND (0.0120) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Carbon Disulfide | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Carbon Tetrachloride | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Chlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Chloroethane | ND (0.0120) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Chloroform | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Chloromethane | ND (0.0120) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| cis-1,2-Dichloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| cis-1,3-Dichloropropene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Dibromochloromethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Dibromomethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Dichlorodifluoromethane | ND (0.0120) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Diethyl Ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Di-isopropyl ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Ethyl tertiary-butyl ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Ethylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Hexachlorobutadiene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Isopropylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Methyl tert-Butyl Ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Methylene Chloride | ND (0.0300) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 4.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| n-Butylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| n-Propylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| sec-Butylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Styrene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| tert-Butylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Tertiary-amyl methyl ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Tetrachloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Tetrahydrofuran | ND (0.0240) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Toluene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| trans-1,2-Dichloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| trans-1,3-Dichloropropene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Trichloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Trichlorofluoromethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Vinyl Chloride | ND (0.0120) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Xylene O | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Xylene P,M | ND (0.0120) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Xylenes (Total) | ND (0.0120) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *109 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *97 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *103 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 1,2,4-Trichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 1,2-Dichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 1,3-Dichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 1,4-Dichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2,4,5-Trichlorophenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2,4,6-Trichlorophenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2,4-Dichlorophenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2,4-Dimethylphenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2,4-Dinitrophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2,4-Dinitrotoluene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2,6-Dinitrotoluene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2-Chloronaphthalene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2-Chlorophenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2-Methylnaphthalene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2-Methylphenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2-Nitrophenol | ND (0.558) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 3,3´-Dichlorobenzidine | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 3+4-Methylphenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 4-Bromophenyl-phenylether | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 4-Chloroaniline | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 4-Nitrophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Acenaphthene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Acenaphthylene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Acetophenone | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Aniline | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Anthracene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Benzo(a)anthracene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Benzo(a)pyrene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Benzo(b)fluoranthene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Benzo(g,h,i)perylene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Benzo(k)fluoranthene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| bis(2-Chloroethoxy)methane | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| bis(2-Chloroethyl)ether | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| bis(2-chloroisopropyl)Ether | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| bis(2-Ethylhexyl)phthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Butylbenzylphthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Chrysene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Dibenzo(a,h)Anthracene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Dibenzofuran | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Diethylphthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Dimethylphthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Di-n-butylphthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Di-n-octylphthalate | ND (0.558) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Fluoranthene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Fluorene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Hexachlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Hexachlorobutadiene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Hexachloroethane | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Indeno(1,2,3-cd)Pyrene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Isophorone | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Naphthalene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Nitrobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Pentachlorophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Phenanthrene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Phenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Pyrene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Pyridine | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *100 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *118 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *104 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *111 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *107 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *111 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *105 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *129 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:03 | --- | DE40918 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:03 | --- | DE40918 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:03 | --- | DE40918 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:03 | --- | DE40918 |
| **Aroclor 1248 [2C]** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:03 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.3** (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:03 | --- | DE40918 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:03 | --- | DE40918 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:03 | --- | DE40918 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:03 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 20.1g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 19:35

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **4,4´-DDD** | **0.0082** (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| 4,4´-DDE | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| 4,4´-DDT | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Aldrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| alpha-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| alpha-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| beta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Chlordane (Total) | ND (0.0224) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| delta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Dieldrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Endosulfan I | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Endosulfan II | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Endosulfan Sulfate | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Endrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Endrin Ketone | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| gamma-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Heptachlor | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Heptachlor Epoxide | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Hexachlorobenzene | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Methoxychlor | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Toxaphene | ND (0.140) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *105 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *92 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |
| 2,4-D | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.053) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |
| Dalapon | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |
| Dinoseb | ND (0.053) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |
| MCPA | ND (2.59) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |
| MCPP | # ND (2.62) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/2/24 20:01

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **14.0** (11.5) | --- | 8100M | --- | 1 | 05/03/24 19:23 | --- | DE40243 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *85 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 51** (5) | --- | 9050A | --- | 1 | LAB | 05/03/24 10:30 | umhos/cm | DE40323 |
| **Corrosivity (pH)** | **8.48** (N/A) | --- | 9045 | --- | 1 | CCP | 05/02/24 19:51 | S.U. | DE40237 |
| **Corrosivity (pH) Sample Temp** | **20.0** | --- | 2550B | --- | 1 | CCP | 05/02/24 19:51 | °C | DE40237 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | JLK | 05/02/24 19:29 | °F | DE40231 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/02/24 20:59 | ml/5 min | DE40257 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/6/24 18:02

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **19.6** (N/A) | --- | 1311 | --- | 1 | RAP | 05/07/24 10:04 | 100 2000 | DE40669 |
| **Temperature (Max C)** | **22.1** (N/A) | --- | 1311 | --- | 1 | RAP | 05/07/24 10:04 | 100 2000 | DE40669 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | --- | | | | 100 2000 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.93** (0.75) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:07 | 2.9 | 100 | DE40304 |
| **Barium** | **21.5** (0.75) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:07 | 2.9 | 100 | DE40304 |
| Cadmium | ND (0.37) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:07 | 2.9 | 100 | DE40304 |
| **Chromium** | **10.2** (0.75) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:07 | 2.9 | 100 | DE40304 |
| **Lead** | **24.2** (3.75) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:07 | 2.9 | 100 | DE40304 |
| Mercury | ND (0.033) | --- | 7471B | --- | 1 | AFV | 05/03/24 17:02 | 0.65 | 40 | DE40305 |
| Selenium | ND (3.75) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:07 | 2.9 | 100 | DE40304 |
| Silver | ND (0.37) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:07 | 2.9 | 100 | DE40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 5.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,1,1-Trichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,1,2,2-Tetrachloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,1,2-Trichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,1-Dichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,1-Dichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,1-Dichloropropene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,2,3-Trichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,2,3-Trichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,2,4-Trichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,2,4-Trimethylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,2-Dibromoethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,2-Dichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,2-Dichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,2-Dichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,3,5-Trimethylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,3-Dichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,3-Dichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,4-Dichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,4-Dioxane | ND (0.0971) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 2,2-Dichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 2-Butanone | ND (0.0485) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 2-Chlorotoluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 2-Hexanone | ND (0.0485) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 4-Chlorotoluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 4-Isopropyltoluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 5.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0485) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Acetone | ND (0.0485) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Benzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Bromobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Bromochloromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Bromodichloromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Bromoform | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Bromomethane | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Carbon Disulfide | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Carbon Tetrachloride | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Chlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Chloroethane | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Chloroform | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Chloromethane | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| cis-1,2-Dichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| cis-1,3-Dichloropropene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Dibromochloromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Dibromomethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Dichlorodifluoromethane | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Diethyl Ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Di-isopropyl ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Ethyl tertiary-butyl ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Ethylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Hexachlorobutadiene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Isopropylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Methyl tert-Butyl Ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Methylene Chloride | ND (0.0243) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 5.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| n-Butylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| n-Propylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| sec-Butylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Styrene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| tert-Butylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Tertiary-amyl methyl ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Tetrachloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Tetrahydrofuran | ND (0.0194) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Toluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| trans-1,2-Dichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| trans-1,3-Dichloropropene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Trichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Trichlorofluoromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Vinyl Chloride | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Xylene O | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Xylene P,M | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Xylenes (Total) | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *107 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *98 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *103 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 1,2,4-Trichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 1,2-Dichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 1,3-Dichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 1,4-Dichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2,4,5-Trichlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2,4,6-Trichlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2,4-Dichlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2,4-Dimethylphenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2,4-Dinitrophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2,4-Dinitrotoluene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2,6-Dinitrotoluene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2-Chloronaphthalene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2-Chlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2-Methylnaphthalene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2-Methylphenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2-Nitrophenol | ND (0.546) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 3,3´-Dichlorobenzidine | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 3+4-Methylphenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 4-Bromophenyl-phenylether | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 4-Chloroaniline | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 4-Nitrophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Acenaphthene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Acenaphthylene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Acetophenone | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Aniline | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Anthracene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Benzo(a)anthracene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Benzo(a)pyrene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Benzo(b)fluoranthene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Benzo(g,h,i)perylene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Benzo(k)fluoranthene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| bis(2-Chloroethoxy)methane | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| bis(2-Chloroethyl)ether | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| bis(2-chloroisopropyl)Ether | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| bis(2-Ethylhexyl)phthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Butylbenzylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Chrysene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Dibenzo(a,h)Anthracene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Dibenzofuran | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Diethylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Dimethylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Di-n-butylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Di-n-octylphthalate | ND (0.546) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| **Fluoranthene** | **0.581** (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Fluorene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Hexachlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Hexachlorobutadiene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Hexachloroethane | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Indeno(1,2,3-cd)Pyrene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Isophorone | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Naphthalene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Nitrobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Pentachlorophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| **Phenanthrene** | **0.559** (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Phenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| **Pyrene** | **0.560** (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Pyridine | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *99 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *110 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *102 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *113 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *102 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *113 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *103 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *136 %* | *S+* | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 19:22 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 19:22 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 19:22 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 19:22 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 19:22 | --- | DE40918 |
| Aroclor 1254 [2C] | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 19:22 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 19:22 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 19:22 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 19:22 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *70 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 19.4g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 19:35

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| 4,4´-DDE | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| 4,4´-DDT | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Aldrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| alpha-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| alpha-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| beta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Chlordane (Total) | ND (0.0224) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| delta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Dieldrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Endosulfan I | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Endosulfan II | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Endosulfan Sulfate | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Endrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Endrin Ketone | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| gamma-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Heptachlor | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Heptachlor Epoxide | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Hexachlorobenzene | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Methoxychlor | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Toxaphene | ND (0.140) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *97 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *90 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 10.5g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |
| MCPA | ND (2.41) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |
| MCPP | ND (2.43) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/2/24 20:01

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **19.6** (10.6) | --- | 8100M | --- | 1 | 05/03/24 20:01 | --- | DE40243 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *91 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 92** (5) | --- | 9050A | --- | 1 | LAB | 05/03/24 10:30 | umhos/cm | DE40323 |
| **Corrosivity (pH)** | **8.80** (N/A) | --- | 9045 | --- | 1 | CCP | 05/02/24 19:51 | S.U. | DE40237 |
| **Corrosivity (pH) Sample Temp** | **20.0** | --- | 2550B | --- | 1 | CCP | 05/02/24 19:51 | °C | DE40237 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | JLK | 05/02/24 19:29 | °F | DE40231 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/02/24 20:59 | ml/5 min | DE40257 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.95** (0.83) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:09 | 2.7 | 100 | DE40304 |
| **Barium** | **24.9** (0.83) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:09 | 2.7 | 100 | DE40304 |
| Cadmium | ND (0.42) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:09 | 2.7 | 100 | DE40304 |
| **Chromium** | **13.0** (0.83) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:09 | 2.7 | 100 | DE40304 |
| **Lead** | **59.7** (4.16) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:09 | 2.7 | 100 | DE40304 |
| **Mercury** | **0.052** (0.035) | --- | 7471B | --- | 1 | AFV | 05/03/24 17:08 | 0.63 | 40 | DE40305 |
| Selenium | ND (4.16) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:09 | 2.7 | 100 | DE40304 |
| Silver | ND (0.42) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:09 | 2.7 | 100 | DE40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 5.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,1,1-Trichloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,1,2,2-Tetrachloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,1,2-Trichloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,1-Dichloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,1-Dichloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,1-Dichloropropene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,2,3-Trichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,2,3-Trichloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,2,4-Trichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,2,4-Trimethylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,2-Dibromoethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,2-Dichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,2-Dichloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,2-Dichloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,3,5-Trimethylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,3-Dichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,3-Dichloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,4-Dichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,4-Dioxane | ND (0.102) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 2,2-Dichloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 2-Butanone | ND (0.0511) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 2-Chlorotoluene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 2-Hexanone | ND (0.0511) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 4-Chlorotoluene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 4-Isopropyltoluene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 5.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0511) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Acetone | ND (0.0511) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Benzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Bromobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Bromochloromethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Bromodichloromethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Bromoform | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Bromomethane | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Carbon Disulfide | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Carbon Tetrachloride | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Chlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Chloroethane | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Chloroform | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Chloromethane | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| cis-1,2-Dichloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| cis-1,3-Dichloropropene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Dibromochloromethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Dibromomethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Dichlorodifluoromethane | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Diethyl Ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Di-isopropyl ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Ethyl tertiary-butyl ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Ethylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Hexachlorobutadiene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Isopropylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Methyl tert-Butyl Ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Methylene Chloride | ND (0.0255) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 5.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| n-Butylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| n-Propylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| sec-Butylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Styrene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| tert-Butylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Tertiary-amyl methyl ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Tetrachloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Tetrahydrofuran | ND (0.0204) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Toluene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| trans-1,2-Dichloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| trans-1,3-Dichloropropene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Trichloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Trichlorofluoromethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Vinyl Chloride | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Xylene O | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Xylene P,M | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Xylenes (Total) | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *112 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *98 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *104 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.029** (0.028) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 1,2,4-Trichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 1,2-Dichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 1,3-Dichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 1,4-Dichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2,4,5-Trichlorophenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2,4,6-Trichlorophenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2,4-Dichlorophenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2,4-Dimethylphenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2,4-Dinitrophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2,4-Dinitrotoluene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2,6-Dinitrotoluene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2-Chloronaphthalene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2-Chlorophenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2-Methylnaphthalene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2-Methylphenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2-Nitrophenol | ND (0.559) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 3,3´-Dichlorobenzidine | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 3+4-Methylphenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 4-Bromophenyl-phenylether | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 4-Chloroaniline | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 4-Nitrophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Acenaphthene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Acenaphthylene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Acetophenone | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Aniline | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Anthracene** | **0.397** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Benzo(a)anthracene** | **0.779** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Benzo(a)pyrene** | **0.802** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Benzo(b)fluoranthene** | **0.550** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Benzo(g,h,i)perylene** | **0.522** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Benzo(k)fluoranthene** | **0.468** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| bis(2-Chloroethoxy)methane | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| bis(2-Chloroethyl)ether | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| bis(2-chloroisopropyl)Ether | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| bis(2-Ethylhexyl)phthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Butylbenzylphthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Chrysene** | **0.774** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Dibenzo(a,h)Anthracene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Dibenzofuran | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Diethylphthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Dimethylphthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Di-n-butylphthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Di-n-octylphthalate | ND (0.559) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Fluoranthene** | **1.39** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Fluorene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Hexachlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Hexachlorobutadiene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Hexachloroethane | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Indeno(1,2,3-cd)Pyrene** | **0.484** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Isophorone | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Naphthalene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Nitrobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Pentachlorophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Phenanthrene** | **1.51** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Phenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Pyrene** | **1.67** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Pyridine | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *98 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *112 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *102 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *111 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *105 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *108 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *103 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *130 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:42 | --- | DE40918 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:42 | --- | DE40918 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:42 | --- | DE40918 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:42 | --- | DE40918 |
| **Aroclor 1248 [2C]** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:42 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:42 | --- | DE40918 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:42 | --- | DE40918 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:42 | --- | DE40918 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:42 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *72 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 19.2g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Aldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0234) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Endrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0018) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Toxaphene | ND (0.146) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *94 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 10g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |
| 2,4-D | ND (0.053) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.053) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |
| Dalapon | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |
| Dicamba | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.053) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |
| Dinoseb | ND (0.053) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |
| MCPA | ND (2.61) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |
| MCPP | # ND (2.64) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/2/24 20:01

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **44.7** (11.7) | --- | 8100M | --- | 1 | 05/03/24 22:35 | --- | DE40243 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *80 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 156** (5) | --- | 9050A | --- | 1 | LAB | 05/03/24 10:30 | umhos/cm | DE40323 |
| **Corrosivity (pH)** | **8.44** (N/A) | --- | 9045 | --- | 1 | CCP | 05/02/24 19:51 | S.U. | DE40237 |
| **Corrosivity (pH) Sample Temp** | **20.0** | --- | 2550B | --- | 1 | CCP | 05/02/24 19:51 | °C | DE40237 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | JLK | 05/02/24 19:29 | °F | DE40231 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/02/24 21:09 | ml/5 min | DE40257 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CO 1-2
Date Sampled: 05/01/24 15:30
Percent Solids: 92
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 20:01 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 20:01 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 20:01 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 20:01 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 20:01 | --- | DE40918 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 20:01 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 20:01 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 20:01 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 20:01 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CO 4-5
Date Sampled: 05/01/24 15:30
Percent Solids: 79
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 20:21 | --- | DE40918 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 20:21 | --- | DE40918 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 20:21 | --- | DE40918 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 20:21 | --- | DE40918 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 20:21 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.3** (0.06) | --- | 8082A | --- | 1 | 05/10/24 20:21 | --- | DE40918 |
| **Aroclor 1260 [2C]** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/10/24 20:21 | --- | DE40918 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 20:21 | --- | DE40918 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 20:21 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *71 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *57 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CO DUP 1-2
Date Sampled: 05/01/24 15:30
Percent Solids: 94
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/12/24 14:13 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/12/24 14:13 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/12/24 14:13 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/12/24 14:13 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/12/24 14:13 | --- | DE40918 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/12/24 14:13 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/12/24 14:13 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/12/24 14:13 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/12/24 14:13 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *93 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *89 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DE40304 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Arsenic | ND | 1.00 | mg/kg wet | | | | | | | |
| Barium | ND | 1.00 | mg/kg wet | | | | | | | |
| Cadmium | ND | 0.50 | mg/kg wet | | | | | | | |
| Chromium | ND | 1.00 | mg/kg wet | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| Selenium | ND | 5.00 | mg/kg wet | | | | | | | |
| Silver | ND | 0.50 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Arsenic | 69.7 | 3.33 | mg/kg wet | 75.60 | | 92 | 80-120 | | | |
| Barium | 747 | 3.33 | mg/kg wet | 372.0 | | 201 | 40-297 | | | |
| Cadmium | 248 | 1.67 | mg/kg wet | 259.0 | | 96 | 80-120 | | | |
| Chromium | 148 | 3.33 | mg/kg wet | 156.0 | | 95 | 80-120 | | | |
| Lead | 206 | 16.7 | mg/kg wet | 225.0 | | 91 | 80-120 | | | |
| Selenium | 76.8 | 16.7 | mg/kg wet | 82.70 | | 93 | 80-120 | | | |
| Silver | 47.5 | 1.67 | mg/kg wet | 51.00 | | 93 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Arsenic | 77.4 | 3.33 | mg/kg wet | 75.60 | | 102 | 80-120 | 10 | 30 | |
| Barium | 779 | 3.33 | mg/kg wet | 372.0 | | 209 | 40-297 | 4 | 30 | |
| Cadmium | 264 | 1.67 | mg/kg wet | 259.0 | | 102 | 80-120 | 6 | 30 | |
| Chromium | 160 | 3.33 | mg/kg wet | 156.0 | | 103 | 80-120 | 8 | 30 | |
| Lead | 223 | 16.7 | mg/kg wet | 225.0 | | 99 | 80-120 | 8 | 30 | |
| Selenium | 83.0 | 16.7 | mg/kg wet | 82.70 | | 100 | 80-120 | 8 | 30 | |
| Silver | 52.0 | 1.67 | mg/kg wet | 51.00 | | 102 | 80-120 | 9 | 30 | |
| **Batch DE40305 - 245.1/7470A** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Mercury | ND | 0.029 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Mercury | 21.4 | 2.91 | mg/kg wet | 25.50 | | 84 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Mercury | 22.7 | 3.14 | mg/kg wet | 25.50 | | 89 | 80-120 | 6 | 30 | |
| **1311 TCLP Metals** | | | | | | | | | | |
| **Batch DE40722 - 3005A_TCLP** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 0.05 | mg/L | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 0.44 | 0.05 | mg/L | 0.5000 | | 88 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 0.44 | 0.05 | mg/L | 0.5000 | | 88 | 80-120 | 0.9 | 20 | |
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dioxane | ND | 0.100 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Acetone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromoform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Carbon Disulfide | ND | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Chloroform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| Dibromomethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methylene Chloride | ND | 0.0250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.0050 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 0.0200 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.0100 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.0050 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.0100 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0516* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0491* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0499* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0512* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0511 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,1,1-Trichloroethane | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 0.0527 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 40-160 | | | |
| 1,1,2-Trichloroethane | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| 1,1-Dichloroethane | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| 1,1-Dichloroethene | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| 1,1-Dichloropropene | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,2,3-Trichloropropane | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 0.0519 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0510 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| 1,2-Dibromoethane | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| 1,2-Dichlorobenzene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| 1,2-Dichloroethane | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,2-Dichloropropane | 0.0500 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,3-Dichlorobenzene | 0.0496 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,3-Dichloropropane | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| 1,4-Dichlorobenzene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,4-Dioxane | 1.02 | 0.100 | mg/kg wet | 1.000 | | 102 | 70-130 | | | |
| 2,2-Dichloropropane | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 2-Butanone | 0.299 | 0.0500 | mg/kg wet | 0.2500 | | 119 | 40-160 | | | |
| 2-Chlorotoluene | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 2-Hexanone | 0.303 | 0.0500 | mg/kg wet | 0.2500 | | 121 | 40-160 | | | |
| 4-Chlorotoluene | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 4-Isopropyltoluene | 0.0480 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 0.264 | 0.0500 | mg/kg wet | 0.2500 | | 106 | 40-160 | | | |
| Acetone | 0.384 | 0.0500 | mg/kg wet | 0.2500 | | 154 | 40-160 | | | |
| Benzene | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Bromobenzene | 0.0512 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Bromochloromethane | 0.0496 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| Bromodichloromethane | 0.0580 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | | | |
| Bromoform | 0.0408 | 0.0050 | mg/kg wet | 0.05000 | | 82 | 40-160 | | | |
| Bromomethane | 0.0484 | 0.0100 | mg/kg wet | 0.05000 | | 97 | 40-160 | | | |
| Carbon Disulfide | 0.0520 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Carbon Tetrachloride | 0.0489 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Chlorobenzene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Chloroethane | 0.0488 | 0.0100 | mg/kg wet | 0.05000 | | 98 | 40-160 | | | |
| Chloroform | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Chloromethane | 0.0442 | 0.0100 | mg/kg wet | 0.05000 | | 88 | 40-160 | | | |
| cis-1,2-Dichloroethene | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| cis-1,3-Dichloropropene | 0.0529 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 40-160 | | | |
| Dibromochloromethane | 0.0493 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 40-160 | | | |
| Dibromomethane | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Dichlorodifluoromethane | 0.0301 | 0.0100 | mg/kg wet | 0.05000 | | 60 | 40-160 | | | |
| Diethyl Ether | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Di-isopropyl ether | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 0.0532 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Ethylbenzene | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| Hexachlorobutadiene | 0.0469 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 40-160 | | | |
| Isopropylbenzene | 0.0551 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| Methyl tert-Butyl Ether | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Methylene Chloride | 0.0453 | 0.0250 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| Naphthalene | 0.0497 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 40-160 | | | |
| n-Butylbenzene | 0.0502 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| n-Propylbenzene | 0.0517 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| sec-Butylbenzene | 0.0472 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| Styrene | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 40-160 | | | |
| tert-Butylbenzene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| Tertiary-amyl methyl ether | 0.0535 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| Tetrachloroethene | 0.0457 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| Tetrahydrofuran | 0.0541 | 0.0200 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Toluene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| trans-1,2-Dichloroethene | 0.0491 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| trans-1,3-Dichloropropene | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Trichloroethene | 0.0479 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Trichlorofluoromethane | 0.0466 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 40-160 | | | |
| Vinyl Chloride | 0.0451 | 0.0100 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| Xylene O | 0.0520 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Xylene P,M | 0.104 | 0.0100 | mg/kg wet | 0.1000 | | 104 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0507* | | mg/kg wet | *0.05000* | | *101* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0499* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0502* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0511* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0489 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 4 | 20 | |
| 1,1,1-Trichloroethane | 0.0475 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 4 | 20 | |
| 1,1,2,2-Tetrachloroethane | 0.0478 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 40-160 | 10 | 20 | |
| 1,1,2-Trichloroethane | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| 1,1-Dichloroethane | 0.0462 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 5 | 20 | |
| 1,1-Dichloroethene | 0.0466 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 4 | 20 | |
| 1,1-Dichloropropene | 0.0451 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | 5 | 20 | |
| 1,2,3-Trichlorobenzene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 4 | 20 | |
| 1,2,3-Trichloropropane | 0.0432 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 70-130 | 8 | 20 | |
| 1,2,4-Trichlorobenzene | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 3 | 20 | |
| 1,2,4-Trimethylbenzene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 1 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 0.0421 | 0.0050 | mg/kg wet | 0.05000 | | 84 | 70-130 | 9 | 20 | |
| 1,2-Dibromoethane | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| 1,2-Dichlorobenzene | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 2 | 20 | |
| 1,2-Dichloroethane | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 5 | 20 | |
| 1,2-Dichloropropane | 0.0478 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 5 | 20 | |
| 1,3,5-Trimethylbenzene | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 2 | 20 | |
| 1,3-Dichlorobenzene | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 3 | 20 | |
| 1,3-Dichloropropane | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 5 | 20 | |
| 1,4-Dichlorobenzene | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 1 | 20 | |
| 1,4-Dioxane | 0.910 | 0.100 | mg/kg wet | 1.000 | | 91 | 70-130 | 11 | 20 | |
| 2,2-Dichloropropane | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 4 | 20 | |
| 2-Butanone | 0.267 | 0.0500 | mg/kg wet | 0.2500 | | 107 | 40-160 | 11 | 20 | |
| 2-Chlorotoluene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 0.6 | 20 | |
| 2-Hexanone | 0.267 | 0.0500 | mg/kg wet | 0.2500 | | 107 | 40-160 | 13 | 20 | |
| 4-Chlorotoluene | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| 4-Isopropyltoluene | 0.0471 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 2 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| 4-Methyl-2-Pentanone | 0.233 | 0.0500 | mg/kg wet | 0.2500 | | 93 | 40-160 | 12 | 20 | |
| Acetone | 0.335 | 0.0500 | mg/kg wet | 0.2500 | | 134 | 40-160 | 14 | 20 | |
| Benzene | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 5 | 20 | |
| Bromobenzene | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 1 | 20 | |
| Bromochloromethane | 0.0479 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 3 | 20 | |
| Bromodichloromethane | 0.0552 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 5 | 20 | |
| Bromoform | 0.0380 | 0.0050 | mg/kg wet | 0.05000 | | 76 | 40-160 | 7 | 20 | |
| Bromomethane | 0.0463 | 0.0100 | mg/kg wet | 0.05000 | | 93 | 40-160 | 4 | 20 | |
| Carbon Disulfide | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 4 | 20 | |
| Carbon Tetrachloride | 0.0467 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 5 | 20 | |
| Chlorobenzene | 0.0484 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 4 | 20 | |
| Chloroethane | 0.0465 | 0.0100 | mg/kg wet | 0.05000 | | 93 | 40-160 | 5 | 20 | |
| Chloroform | 0.0484 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 4 | 20 | |
| Chloromethane | 0.0423 | 0.0100 | mg/kg wet | 0.05000 | | 85 | 40-160 | 4 | 20 | |
| cis-1,2-Dichloroethene | 0.0480 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 5 | 20 | |
| cis-1,3-Dichloropropene | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 40-160 | 5 | 20 | |
| Dibromochloromethane | 0.0468 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 40-160 | 5 | 20 | |
| Dibromomethane | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| Dichlorodifluoromethane | 0.0280 | 0.0100 | mg/kg wet | 0.05000 | | 56 | 40-160 | 7 | 20 | |
| Diethyl Ether | 0.0511 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 5 | 20 | |
| Di-isopropyl ether | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 4 | 20 | |
| Ethyl tertiary-butyl ether | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 5 | 20 | |
| Ethylbenzene | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| Hexachlorobutadiene | 0.0460 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 40-160 | 2 | 20 | |
| Isopropylbenzene | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 2 | 20 | |
| Methyl tert-Butyl Ether | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| Methylene Chloride | 0.0439 | 0.0250 | mg/kg wet | 0.05000 | | 88 | 70-130 | 3 | 20 | |
| Naphthalene | 0.0473 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 40-160 | 5 | 20 | |
| n-Butylbenzene | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| n-Propylbenzene | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 2 | 20 | |
| sec-Butylbenzene | 0.0463 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 2 | 20 | |
| Styrene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 40-160 | 4 | 20 | |
| tert-Butylbenzene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 2 | 20 | |
| Tertiary-amyl methyl ether | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 6 | 20 | |
| Tetrachloroethene | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 5 | 20 | |
| Tetrahydrofuran | 0.0469 | 0.0200 | mg/kg wet | 0.05000 | | 94 | 70-130 | 14 | 20 | |
| Toluene | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 4 | 20 | |
| trans-1,2-Dichloroethene | 0.0464 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 6 | 20 | |
| trans-1,3-Dichloropropene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| Trichloroethene | 0.0462 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 4 | 20 | |
| Trichlorofluoromethane | 0.0445 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 40-160 | 5 | 20 | |
| Vinyl Chloride | 0.0423 | 0.0100 | mg/kg wet | 0.05000 | | 85 | 70-130 | 6 | 20 | |
| Xylene O | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 3 | 20 | |
| Xylene P,M | 0.101 | 0.0100 | mg/kg wet | 0.1000 | | 101 | 70-130 | 3 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0495* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0492* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0493* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0508* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40208 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40208 - 3546** | | | | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyridine | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.23* | | mg/kg wet | *2.500* | | *89* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.20* | | mg/kg wet | *3.750* | | *85* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.44* | | mg/kg wet | *3.750* | | *92* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.40* | | mg/kg wet | *2.500* | | *96* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.53* | | mg/kg wet | *3.750* | | *94* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.35* | | mg/kg wet | *2.500* | | *94* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.43* | | mg/kg wet | *3.750* | | *91* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.74* | | mg/kg wet | *2.500* | | *110* | *30-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.33 | 0.025 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 2.03 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| 1,2-Dichlorobenzene | 2.16 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| 1,3-Dichlorobenzene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.19 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 30-130 | | | |
| 2,4-Dichlorophenol | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | | | |
| 2,4-Dimethylphenol | 3.58 | 0.250 | mg/kg wet | 2.500 | | 143 | 30-130 | | | B+ |
| 2,4-Dinitrophenol | 1.86 | 1.00 | mg/kg wet | 2.500 | | 74 | 15-140 | | | |
| 2,4-Dinitrotoluene | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| 2-Chloronaphthalene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| 2-Chlorophenol | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 30-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40208 - 3546** | | | | | | | | | | |
| 2-Methylnaphthalene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| 2-Methylphenol | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 15-140 | | | |
| 2-Nitrophenol | 2.01 | 0.500 | mg/kg wet | 2.500 | | 81 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| 3+4-Methylphenol | 4.54 | 0.250 | mg/kg wet | 5.000 | | 91 | 15-140 | | | |
| 4-Bromophenyl-phenylether | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | | | |
| 4-Chloroaniline | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 15-140 | | | |
| 4-Nitrophenol | 2.16 | 1.00 | mg/kg wet | 2.500 | | 87 | 15-140 | | | |
| Acenaphthene | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Acenaphthylene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Acetophenone | 2.06 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Aniline | 2.19 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Anthracene | 2.61 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Azobenzene | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Benzo(a)anthracene | 2.61 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Benzo(a)pyrene | 2.66 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.71 | 0.250 | mg/kg wet | 2.500 | | 108 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 2.01 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Butylbenzylphthalate | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| Chrysene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.70 | 0.250 | mg/kg wet | 2.500 | | 108 | 40-140 | | | |
| Dibenzofuran | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Diethylphthalate | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Dimethylphthalate | 2.54 | 0.250 | mg/kg wet | 2.500 | | 101 | 15-140 | | | |
| Di-n-butylphthalate | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Di-n-octylphthalate | 2.60 | 0.500 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Fluoranthene | 2.55 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| Fluorene | 2.51 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Hexachlorobenzene | 2.51 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Hexachlorobutadiene | 2.14 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Hexachloroethane | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Isophorone | 1.97 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| Naphthalene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Nitrobenzene | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| N-Nitrosodimethylamine | 2.03 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Pentachlorophenol | 2.05 | 1.00 | mg/kg wet | 2.500 | | 82 | 15-140 | | | |
| Phenanthrene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| Phenol | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 15-140 | | | |
| Pyrene | 2.73 | 0.250 | mg/kg wet | 2.500 | | 109 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40208 - 3546** | | | | | | | | | | |
| Pyridine | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.19* | | mg/kg wet | *2.500* | | *88* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.88* | | mg/kg wet | *3.750* | | *103* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.39* | | mg/kg wet | *3.750* | | *90* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.44* | | mg/kg wet | *2.500* | | *98* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.42* | | mg/kg wet | *3.750* | | *91* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.10* | | mg/kg wet | *2.500* | | *84* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.35* | | mg/kg wet | *3.750* | | *89* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.74* | | mg/kg wet | *2.500* | | *110* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.37 | 0.025 | mg/kg wet | 2.500 | | 95 | 40-140 | 2 | 30 | |
| 1,2,4-Trichlorobenzene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 0.8 | 30 | |
| 1,2-Dichlorobenzene | 2.16 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 0.4 | 30 | |
| 1,3-Dichlorobenzene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 1 | 30 | |
| 1,4-Dichlorobenzene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | 1 | 30 | |
| 2,4,5-Trichlorophenol | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 30-130 | 1 | 30 | |
| 2,4,6-Trichlorophenol | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 30-130 | 1 | 30 | |
| 2,4-Dichlorophenol | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | 0.3 | 30 | |
| 2,4-Dimethylphenol | 3.57 | 0.250 | mg/kg wet | 2.500 | | 143 | 30-130 | 0.09 | 30 | B+ |
| 2,4-Dinitrophenol | 1.65 | 1.00 | mg/kg wet | 2.500 | | 66 | 15-140 | 12 | 30 | |
| 2,4-Dinitrotoluene | 2.57 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 2 | 30 | |
| 2,6-Dinitrotoluene | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 3 | 30 | |
| 2-Chloronaphthalene | 2.50 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 3 | 30 | |
| 2-Chlorophenol | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 30-130 | 2 | 30 | |
| 2-Methylnaphthalene | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 0.7 | 30 | |
| 2-Methylphenol | 2.36 | 0.250 | mg/kg wet | 2.500 | | 95 | 15-140 | 3 | 30 | |
| 2-Nitrophenol | 2.00 | 0.500 | mg/kg wet | 2.500 | | 80 | 30-130 | 0.6 | 30 | |
| 3,3´-Dichlorobenzidine | 2.58 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 6 | 30 | |
| 3+4-Methylphenol | 4.72 | 0.250 | mg/kg wet | 5.000 | | 94 | 15-140 | 4 | 30 | |
| 4-Bromophenyl-phenylether | 2.76 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | 3 | 30 | |
| 4-Chloroaniline | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 15-140 | 7 | 30 | |
| 4-Nitrophenol | 2.20 | 1.00 | mg/kg wet | 2.500 | | 88 | 15-140 | 2 | 30 | |
| Acenaphthene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 3 | 30 | |
| Acenaphthylene | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 1 | 30 | |
| Acetophenone | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 3 | 30 | |
| Aniline | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 3 | 30 | |
| Anthracene | 2.66 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 2 | 30 | |
| Azobenzene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 2 | 30 | |
| Benzo(a)anthracene | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 3 | 30 | |
| Benzo(a)pyrene | 2.73 | 0.250 | mg/kg wet | 2.500 | | 109 | 40-140 | 3 | 30 | |
| Benzo(b)fluoranthene | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 1 | 30 | |
| Benzo(g,h,i)perylene | 2.87 | 0.250 | mg/kg wet | 2.500 | | 115 | 40-140 | 6 | 30 | |
| Benzo(k)fluoranthene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 2 | 30 | |
| bis(2-Chloroethoxy)methane | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 0.6 | 30 | |
| bis(2-Chloroethyl)ether | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 0.2 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40208 - 3546** | | | | | | | | | | |
| bis(2-chloroisopropyl)Ether | 1.93 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | 1 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 2 | 30 | |
| Butylbenzylphthalate | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 0.6 | 30 | |
| Chrysene | 2.57 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 3 | 30 | |
| Dibenzo(a,h)Anthracene | 2.87 | 0.250 | mg/kg wet | 2.500 | | 115 | 40-140 | 6 | 30 | |
| Dibenzofuran | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 2 | 30 | |
| Diethylphthalate | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 2 | 30 | |
| Dimethylphthalate | 2.55 | 0.250 | mg/kg wet | 2.500 | | 102 | 15-140 | 0.7 | 30 | |
| Di-n-butylphthalate | 2.64 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 2 | 30 | |
| Di-n-octylphthalate | 2.50 | 0.500 | mg/kg wet | 2.500 | | 100 | 40-140 | 4 | 30 | |
| Fluoranthene | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 3 | 30 | |
| Fluorene | 2.55 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 1 | 30 | |
| Hexachlorobenzene | 2.56 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 2 | 30 | |
| Hexachlorobutadiene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 2 | 30 | |
| Hexachloroethane | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 0.2 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.79 | 0.250 | mg/kg wet | 2.500 | | 112 | 40-140 | 7 | 30 | |
| Isophorone | 1.97 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | 0.1 | 30 | |
| Naphthalene | 2.02 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | 1 | 30 | |
| Nitrobenzene | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 0.3 | 30 | |
| N-Nitrosodimethylamine | 2.06 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 1 | 30 | |
| Pentachlorophenol | 2.05 | 1.00 | mg/kg wet | 2.500 | | 82 | 15-140 | 0.3 | 30 | |
| Phenanthrene | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 3 | 30 | |
| Phenol | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 15-140 | 3 | 30 | |
| Pyrene | 2.77 | 0.250 | mg/kg wet | 2.500 | | 111 | 40-140 | 1 | 30 | |
| Pyridine | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 1 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.20* | | mg/kg wet | *2.500* | | *88* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.92* | | mg/kg wet | *3.750* | | *104* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.45* | | mg/kg wet | *3.750* | | *92* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.47* | | mg/kg wet | *2.500* | | *99* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.52* | | mg/kg wet | *3.750* | | *94* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.11* | | mg/kg wet | *2.500* | | *85* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.42* | | mg/kg wet | *3.750* | | *91* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.75* | | mg/kg wet | *2.500* | | *110* | *30-130* | | | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE40918 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE40918 - 3540C** | | | | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0226* | | mg/kg wet | *0.02500* | | *90* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0205* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0193* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | 1 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | 0.9 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 2 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | 2 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0191* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40209 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 4,4´-DDD | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDD [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40209 - 3546** | | | | | | | | | | |
| alpha-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Chlordane (Total) | ND | 0.0200 | mg/kg wet | | | | | | | |
| Chlordane (Total) [2C] | ND | 0.0200 | mg/kg wet | | | | | | | |
| delta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| delta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) [2C] | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Toxaphene | ND | 0.125 | mg/kg wet | | | | | | | |
| Toxaphene [2C] | ND | 0.125 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0139* | | mg/kg wet | *0.01250* | | *111* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0139* | | mg/kg wet | *0.01250* | | *111* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0119* | | mg/kg wet | *0.01250* | | *95* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0124* | | mg/kg wet | *0.01250* | | *100* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 4,4´-DDD | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | | | |
| 4,4´-DDD [2C] | 0.0154 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | | | |
| 4,4´-DDE | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | | | |
| 4,4´-DDE [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| 4,4´-DDT | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40209 - 3546** | | | | | | | | | | |
| 4,4´-DDT [2C] | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| Aldrin | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Aldrin [2C] | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| alpha-BHC | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| alpha-BHC [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| alpha-Chlordane | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | | | |
| alpha-Chlordane [2C] | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| beta-BHC | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | | | |
| beta-BHC [2C] | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| delta-BHC | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| delta-BHC [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| Dieldrin | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| Dieldrin [2C] | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | | | |
| Endosulfan I | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Endosulfan I [2C] | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| Endosulfan II | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | | | |
| Endosulfan II [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| Endosulfan Sulfate | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | | | |
| Endosulfan Sulfate [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| Endrin | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |
| Endrin [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| Endrin Ketone | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | | | |
| Endrin Ketone [2C] | 0.0150 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | | | |
| gamma-BHC (Lindane) | 0.0134 | 0.0015 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| gamma-BHC (Lindane) [2C] | 0.0139 | 0.0015 | mg/kg wet | 0.01250 | | 111 | 40-140 | | | |
| gamma-Chlordane | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | | | |
| gamma-Chlordane [2C] | 0.0151 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | | | |
| Heptachlor | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| Heptachlor [2C] | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| Heptachlor Epoxide | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| Heptachlor Epoxide [2C] | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| Hexachlorobenzene | 0.0124 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | | | |
| Hexachlorobenzene [2C] | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Methoxychlor | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Methoxychlor [2C] | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0133* | | mg/kg wet | *0.01250* | | *106* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0133* | | mg/kg wet | *0.01250* | | *107* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0124* | | mg/kg wet | *0.01250* | | *99* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0130* | | mg/kg wet | *0.01250* | | *104* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 4,4´-DDD | 0.0157 | 0.0025 | mg/kg wet | 0.01250 | | 126 | 40-140 | 5 | 30 | |
| 4,4´-DDD [2C] | 0.0162 | 0.0025 | mg/kg wet | 0.01250 | | 129 | 40-140 | 5 | 30 | |
| 4,4´-DDE | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | 4 | 30 | |
| 4,4´-DDE [2C] | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 4 | 30 | |
| 4,4´-DDT | 0.0153 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | 8 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40209 - 3546** | | | | | | | | | | |
| 4,4´-DDT [2C] | 0.0154 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | 8 | 30 | |
| Aldrin | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 4 | 30 | |
| Aldrin [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 3 | 30 | |
| alpha-BHC | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 4 | 30 | |
| alpha-BHC [2C] | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | 4 | 30 | |
| alpha-Chlordane | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | 3 | 30 | |
| alpha-Chlordane [2C] | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 3 | 30 | |
| beta-BHC | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | 3 | 30 | |
| beta-BHC [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 0.2 | 30 | |
| delta-BHC | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 4 | 30 | |
| delta-BHC [2C] | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 5 | 30 | |
| Dieldrin | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 3 | 30 | |
| Dieldrin [2C] | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | 3 | 30 | |
| Endosulfan I | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | 4 | 30 | |
| Endosulfan I [2C] | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 3 | 30 | |
| Endosulfan II | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 4 | 30 | |
| Endosulfan II [2C] | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 4 | 30 | |
| Endosulfan Sulfate | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 6 | 30 | |
| Endosulfan Sulfate [2C] | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | 7 | 30 | |
| Endrin | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 3 | 30 | |
| Endrin [2C] | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 3 | 30 | |
| Endrin Ketone | 0.0158 | 0.0025 | mg/kg wet | 0.01250 | | 127 | 40-140 | 7 | 30 | |
| Endrin Ketone [2C] | 0.0161 | 0.0025 | mg/kg wet | 0.01250 | | 128 | 40-140 | 7 | 30 | |
| gamma-BHC (Lindane) | 0.0138 | 0.0015 | mg/kg wet | 0.01250 | | 111 | 40-140 | 3 | 30 | |
| gamma-BHC (Lindane) [2C] | 0.0144 | 0.0015 | mg/kg wet | 0.01250 | | 115 | 40-140 | 3 | 30 | |
| gamma-Chlordane | 0.0153 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | 3 | 30 | |
| gamma-Chlordane [2C] | 0.0156 | 0.0025 | mg/kg wet | 0.01250 | | 125 | 40-140 | 3 | 30 | |
| Heptachlor | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 3 | 30 | |
| Heptachlor [2C] | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 4 | 30 | |
| Heptachlor Epoxide | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 3 | 30 | |
| Heptachlor Epoxide [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 3 | 30 | |
| Hexachlorobenzene | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 4 | 30 | |
| Hexachlorobenzene [2C] | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 5 | 30 | |
| Methoxychlor | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 10 | 30 | |
| Methoxychlor [2C] | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 9 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0140* | | mg/kg wet | *0.01250* | | *112* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0140* | | mg/kg wet | *0.01250* | | *112* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0126* | | mg/kg wet | *0.01250* | | *101* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0131* | | mg/kg wet | *0.01250* | | *105* | *30-150* | | | |
| **Batch DE40622 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 4,4´-DDD | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDD [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE | ND | 0.0025 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8081B Organochlorine Pesticides | | | | | | | | | | |
| **Batch DE40622 - 3546** | | | | | | | | | | |
| 4,4´-DDE [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Chlordane (Total) | ND | 0.0200 | mg/kg wet | | | | | | | |
| Chlordane (Total) [2C] | ND | 0.0200 | mg/kg wet | | | | | | | |
| delta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| delta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) [2C] | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Toxaphene | ND | 0.125 | mg/kg wet | | | | | | | |
| Toxaphene [2C] | ND | 0.125 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0146* | | mg/kg wet | *0.01250* | | *117* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0146* | | mg/kg wet | *0.01250* | | *117* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0127* | | mg/kg wet | *0.01250* | | *102* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0132* | | mg/kg wet | *0.01250* | | *105* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40622 - 3546** | | | | | | | | | | |
| **LCS** | | | | | | | | | | |
| 4,4´-DDD | 0.0166 | 0.0025 | mg/kg wet | 0.01250 | | 133 | 40-140 | | | |
| 4,4´-DDD [2C] | 0.0172 | 0.0025 | mg/kg wet | 0.01250 | | 138 | 40-140 | | | |
| 4,4´-DDE | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | | | |
| 4,4´-DDE [2C] | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | | | |
| 4,4´-DDT | 0.0154 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | | | |
| 4,4´-DDT [2C] | 0.0156 | 0.0025 | mg/kg wet | 0.01250 | | 125 | 40-140 | | | |
| Aldrin | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Aldrin [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| alpha-BHC | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| alpha-BHC [2C] | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | | | |
| alpha-Chlordane | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| alpha-Chlordane [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| beta-BHC | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| beta-BHC [2C] | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| delta-BHC | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| delta-BHC [2C] | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | | | |
| Dieldrin | 0.0151 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | | | |
| Dieldrin [2C] | 0.0157 | 0.0025 | mg/kg wet | 0.01250 | | 126 | 40-140 | | | |
| Endosulfan I | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Endosulfan I [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| Endosulfan II | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | | | |
| Endosulfan II [2C] | 0.0154 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | | | |
| Endosulfan Sulfate | 0.0155 | 0.0025 | mg/kg wet | 0.01250 | | 124 | 40-140 | | | |
| Endosulfan Sulfate [2C] | 0.0158 | 0.0025 | mg/kg wet | 0.01250 | | 126 | 40-140 | | | |
| Endrin | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | | | |
| Endrin [2C] | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | | | |
| Endrin Ketone | 0.0166 | 0.0025 | mg/kg wet | 0.01250 | | 133 | 40-140 | | | |
| Endrin Ketone [2C] | 0.0166 | 0.0025 | mg/kg wet | 0.01250 | | 132 | 40-140 | | | |
| gamma-BHC (Lindane) | 0.0140 | 0.0015 | mg/kg wet | 0.01250 | | 112 | 40-140 | | | |
| gamma-BHC (Lindane) [2C] | 0.0143 | 0.0015 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| gamma-Chlordane | 0.0156 | 0.0025 | mg/kg wet | 0.01250 | | 125 | 40-140 | | | |
| gamma-Chlordane [2C] | 0.0160 | 0.0025 | mg/kg wet | 0.01250 | | 128 | 40-140 | | | |
| Heptachlor | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| Heptachlor [2C] | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Heptachlor Epoxide | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |
| Heptachlor Epoxide [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| Hexachlorobenzene | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | | | |
| Hexachlorobenzene [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Methoxychlor | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | | | |
| Methoxychlor [2C] | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0150* | | mg/kg wet | *0.01250* | | *120* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0150* | | mg/kg wet | *0.01250* | | *120* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0129* | | mg/kg wet | *0.01250* | | *103* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0132* | | mg/kg wet | *0.01250* | | *106* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40622 - 3546** | | | | | | | | | | |
| **LCS Dup** | | | | | | | | | | |
| 4,4´-DDD | 0.0159 | 0.0025 | mg/kg wet | 0.01250 | | 128 | 40-140 | 4 | 30 | |
| 4,4´-DDD [2C] | 0.0166 | 0.0025 | mg/kg wet | 0.01250 | | 133 | 40-140 | 4 | 30 | |
| 4,4´-DDE | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 3 | 30 | |
| 4,4´-DDE [2C] | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 2 | 30 | |
| 4,4´-DDT | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 3 | 30 | |
| 4,4´-DDT [2C] | 0.0151 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | 3 | 30 | |
| Aldrin | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 1 | 30 | |
| Aldrin [2C] | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 1 | 30 | |
| alpha-BHC | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 1 | 30 | |
| alpha-BHC [2C] | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 1 | 30 | |
| alpha-Chlordane | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 3 | 30 | |
| alpha-Chlordane [2C] | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | 2 | 30 | |
| beta-BHC | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | 2 | 30 | |
| beta-BHC [2C] | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 2 | 30 | |
| delta-BHC | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 3 | 30 | |
| delta-BHC [2C] | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 3 | 30 | |
| Dieldrin | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 3 | 30 | |
| Dieldrin [2C] | 0.0153 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | 3 | 30 | |
| Endosulfan I | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | 3 | 30 | |
| Endosulfan I [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 2 | 30 | |
| Endosulfan II | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 3 | 30 | |
| Endosulfan II [2C] | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 3 | 30 | |
| Endosulfan Sulfate | 0.0150 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | 3 | 30 | |
| Endosulfan Sulfate [2C] | 0.0153 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | 3 | 30 | |
| Endrin | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 3 | 30 | |
| Endrin [2C] | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 3 | 30 | |
| Endrin Ketone | 0.0159 | 0.0025 | mg/kg wet | 0.01250 | | 127 | 40-140 | 4 | 30 | |
| Endrin Ketone [2C] | 0.0159 | 0.0025 | mg/kg wet | 0.01250 | | 127 | 40-140 | 4 | 30 | |
| gamma-BHC (Lindane) | 0.0137 | 0.0015 | mg/kg wet | 0.01250 | | 110 | 40-140 | 2 | 30 | |
| gamma-BHC (Lindane) [2C] | 0.0141 | 0.0015 | mg/kg wet | 0.01250 | | 113 | 40-140 | 2 | 30 | |
| gamma-Chlordane | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | 3 | 30 | |
| gamma-Chlordane [2C] | 0.0157 | 0.0025 | mg/kg wet | 0.01250 | | 125 | 40-140 | 2 | 30 | |
| Heptachlor | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 1 | 30 | |
| Heptachlor [2C] | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 1 | 30 | |
| Heptachlor Epoxide | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 2 | 30 | |
| Heptachlor Epoxide [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 2 | 30 | |
| Hexachlorobenzene | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | 0.2 | 30 | |
| Hexachlorobenzene [2C] | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 0.4 | 30 | |
| Methoxychlor | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 5 | 30 | |
| Methoxychlor [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 3 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0138* | | mg/kg wet | *0.01250* | | *110* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0139* | | mg/kg wet | *0.01250* | | *111* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0125* | | mg/kg wet | *0.01250* | | *100* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0128* | | mg/kg wet | *0.01250* | | *102* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DE40659 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 2,4,5-T | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-T [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4-D | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-D [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-DB | ND | 0.048 | mg/kg wet | | | | | | | |
| 2,4-DB [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| Dalapon | ND | 0.046 | mg/kg wet | | | | | | | |
| Dalapon [2C] | ND | 0.046 | mg/kg wet | | | | | | | |
| Dicamba | ND | 0.009 | mg/kg wet | | | | | | | |
| Dicamba [2C] | ND | 0.009 | mg/kg wet | | | | | | | |
| Dichlorprop | ND | 0.047 | mg/kg wet | | | | | | | |
| Dichlorprop [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| Dinoseb | ND | 0.048 | mg/kg wet | | | | | | | |
| Dinoseb [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| MCPA | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPA [2C] | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPP | ND | 2.35 | mg/kg wet | | | | | | | |
| MCPP [2C] | ND | 2.35 | mg/kg wet | | | | | | | |
| *Surrogate: DCAA* | *0.149* | | mg/kg wet | *0.2000* | | *74* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.138* | | mg/kg wet | *0.2000* | | *69* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 2,4,5-T | 0.015 | 0.010 | mg/kg wet | 0.01900 | | 78 | 40-140 | | | |
| 2,4,5-T [2C] | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 86 | 40-140 | | | |
| 2,4,5-TP (Silvex) | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 82 | 40-140 | | | |
| 2,4,5-TP (Silvex) [2C] | 0.018 | 0.010 | mg/kg wet | 0.01900 | | 94 | 40-140 | | | |
| 2,4-D | 0.149 | 0.047 | mg/kg wet | 0.1880 | | 79 | 40-140 | | | |
| 2,4-D [2C] | 0.150 | 0.047 | mg/kg wet | 0.1880 | | 80 | 40-140 | | | |
| 2,4-DB | 0.160 | 0.048 | mg/kg wet | 0.1900 | | 84 | 40-140 | | | |
| 2,4-DB [2C] | 0.190 | 0.048 | mg/kg wet | 0.1900 | | 100 | 40-140 | | | |
| Dalapon | 0.339 | 0.046 | mg/kg wet | 0.4550 | | 74 | 40-140 | | | |
| Dalapon [2C] | 0.393 | 0.046 | mg/kg wet | 0.4550 | | 86 | 40-140 | | | |
| Dicamba | 0.015 | 0.009 | mg/kg wet | 0.01880 | | 78 | 40-140 | | | |
| Dicamba [2C] | 0.018 | 0.009 | mg/kg wet | 0.01880 | | 98 | 40-140 | | | |
| Dichlorprop | 0.184 | 0.047 | mg/kg wet | 0.1880 | | 98 | 40-140 | | | |
| Dichlorprop [2C] | 0.186 | 0.047 | mg/kg wet | 0.1880 | | 99 | 40-140 | | | |
| Dinoseb | 0.026 | 0.048 | mg/kg wet | 0.09500 | | 28 | 10-100 | | | |
| Dinoseb [2C] | 0.030 | 0.048 | mg/kg wet | 0.09500 | | 31 | 10-100 | | | |
| MCPA | 15.6 | 2.32 | mg/kg wet | 18.60 | | 84 | 40-140 | | | |
| MCPA [2C] | 18.2 | 2.32 | mg/kg wet | 18.60 | | 98 | 40-140 | | | |
| MCPP | 16.3 | 2.35 | mg/kg wet | 18.80 | | 87 | 40-140 | | | |
| MCPP [2C] | 18.4 | 2.35 | mg/kg wet | 18.80 | | 98 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DE40659 - 3546** | | | | | | | | | | |
| *Surrogate: DCAA* | *0.218* | | mg/kg wet | *0.2000* | | *109* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.206* | | mg/kg wet | *0.2000* | | *103* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 2,4,5-T | 0.013 | 0.010 | mg/kg wet | 0.01900 | | 68 | 40-140 | 14 | 30 | |
| 2,4,5-T [2C] | 0.014 | 0.010 | mg/kg wet | 0.01900 | | 74 | 40-140 | 15 | 30 | |
| 2,4,5-TP (Silvex) | 0.014 | 0.010 | mg/kg wet | 0.01900 | | 72 | 40-140 | 13 | 30 | |
| 2,4,5-TP (Silvex) [2C] | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 82 | 40-140 | 14 | 30 | |
| 2,4-D | 0.134 | 0.047 | mg/kg wet | 0.1880 | | 71 | 40-140 | 11 | 30 | |
| 2,4-D [2C] | 0.130 | 0.047 | mg/kg wet | 0.1880 | | 69 | 40-140 | 14 | 30 | |
| 2,4-DB | 0.144 | 0.048 | mg/kg wet | 0.1900 | | 76 | 40-140 | 11 | 30 | |
| 2,4-DB [2C] | 0.164 | 0.048 | mg/kg wet | 0.1900 | | 86 | 40-140 | 14 | 30 | |
| Dalapon | 0.309 | 0.046 | mg/kg wet | 0.4550 | | 68 | 40-140 | 9 | 30 | |
| Dalapon [2C] | 0.319 | 0.046 | mg/kg wet | 0.4550 | | 70 | 40-140 | 21 | 30 | |
| Dicamba | 0.014 | 0.009 | mg/kg wet | 0.01880 | | 72 | 40-140 | 8 | 30 | |
| Dicamba [2C] | 0.016 | 0.009 | mg/kg wet | 0.01880 | | 86 | 40-140 | 13 | 30 | |
| Dichlorprop | 0.164 | 0.047 | mg/kg wet | 0.1880 | | 87 | 40-140 | 12 | 30 | |
| Dichlorprop [2C] | 0.164 | 0.047 | mg/kg wet | 0.1880 | | 87 | 40-140 | 13 | 30 | |
| Dinoseb | 0.022 | 0.048 | mg/kg wet | 0.09500 | | 23 | 10-100 | 19 | 30 | |
| Dinoseb [2C] | 0.025 | 0.048 | mg/kg wet | 0.09500 | | 26 | 10-100 | 18 | 30 | |
| MCPA | 13.9 | 2.32 | mg/kg wet | 18.60 | | 75 | 40-140 | 11 | 30 | |
| MCPA [2C] | 16.0 | 2.32 | mg/kg wet | 18.60 | | 86 | 40-140 | 13 | 30 | |
| MCPP | 14.5 | 2.35 | mg/kg wet | 18.80 | | 77 | 40-140 | 12 | 30 | |
| MCPP [2C] | 15.8 | 2.35 | mg/kg wet | 18.80 | | 84 | 40-140 | 15 | 30 | |
| *Surrogate: DCAA* | *0.185* | | mg/kg wet | *0.2000* | | *92* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.172* | | mg/kg wet | *0.2000* | | *86* | *30-150* | | | |
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40151 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *4.44* | | mg/kg wet | *5.000* | | *89* | *40-140* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40151 - 3546** | | | | | | | | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | | | |
| Docosane (C22) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Dodecane (C12) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Eicosane (C20) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Hexacosane (C26) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Hexadecane (C16) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Nonadecane (C19) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 62 | 30-140 | | | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Octadecane (C18) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Tetracosane (C24) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Tetradecane (C14) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 28.8 | 10.0 | mg/kg wet | 35.00 | | 82 | 40-140 | | | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *4.23* | | mg/kg wet | *5.000* | | *85* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | 4 | 25 | |
| Docosane (C22) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 2 | 25 | |
| Dodecane (C12) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 3 | 25 | |
| Eicosane (C20) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 2 | 25 | |
| Hexacosane (C26) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 0.7 | 25 | |
| Hexadecane (C16) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | 2 | 25 | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 95 | 40-140 | 0.5 | 25 | |
| Nonadecane (C19) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 3 | 25 | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 65 | 30-140 | 5 | 25 | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 0.1 | 25 | |
| Octadecane (C18) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 3 | 25 | |
| Tetracosane (C24) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | 2 | 25 | |
| Tetradecane (C14) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 3 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 29.9 | 10.0 | mg/kg wet | 35.00 | | 85 | 40-140 | 4 | 25 | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 0.3 | 25 | |
| *Surrogate: O-Terphenyl* | *4.25* | | mg/kg wet | *5.000* | | *85* | *40-140* | | | |
| **Batch DE40243 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40243 - 3546** | | | | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *4.10* | | mg/kg wet | *5.000* | | *82* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.7 | 0.2 | mg/kg wet | 2.500 | | 68 | 40-140 | | | |
| Docosane (C22) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Dodecane (C12) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Eicosane (C20) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Hexacosane (C26) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Hexadecane (C16) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Nonadecane (C19) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Nonane (C9) | 1.4 | 0.2 | mg/kg wet | 2.500 | | 58 | 30-140 | | | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Octadecane (C18) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Tetracosane (C24) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| Tetradecane (C14) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 28.6 | 10.0 | mg/kg wet | 35.00 | | 82 | 40-140 | | | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *4.02* | | mg/kg wet | *5.000* | | *80* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 65 | 40-140 | 5 | 25 | |
| Docosane (C22) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 5 | 25 | |
| Dodecane (C12) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | 6 | 25 | |
| Eicosane (C20) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 5 | 25 | |
| Hexacosane (C26) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 4 | 25 | |
| Hexadecane (C16) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 5 | 25 | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 94 | 40-140 | 0.09 | 25 | |
| Nonadecane (C19) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | 5 | 25 | |
| Nonane (C9) | 1.4 | 0.2 | mg/kg wet | 2.500 | | 55 | 30-140 | 4 | 25 | |
| Octacosane (C28) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 3 | 25 | |
| Octadecane (C18) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | 6 | 25 | |
| Tetracosane (C24) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | 4 | 25 | |
| Tetradecane (C14) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | 6 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 27.4 | 10.0 | mg/kg wet | 35.00 | | 78 | 40-140 | 4 | 25 | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 1 | 25 | |
| *Surrogate: O-Terphenyl* | *3.75* | | mg/kg wet | *5.000* | | *75* | *40-140* | | | |
| **Classical Chemistry** | | | | | | | | | | |
| **Batch DE40231 - General Preparation** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Classical Chemistry** | | | | | | | | | | |
| **Batch DE40231 - General Preparation** | | | | | | | | | | |
| **Reference** | | | | | | | | | | |
| Flashpoint | 81 | | °F | 81.00 | | 100 | 97.9-102.1 | | | |
| **Batch DE40323 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Conductivity | ND | 5 | umhos/cm | | | | | | | |
| **LCS** | | | | | | | | | | |
| Conductivity | 1280 | | umhos/cm | 1410 | | 91 | 90-110 | | | |
| **Batch DE40342 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Reactive Cyanide | ND | 2.0 | mg/kg | | | | | | | |
| Reactive Sulfide | ND | 2.0 | mg/kg | | | | | | | |
| **LCS** | | | | | | | | | | |
| Reactive Cyanide | 4.2 | 2.0 | mg/kg | 100.3 | | 4 | 0.68-5.41 | | | |
| Reactive Sulfide | 2.0 | 2.0 | mg/kg | 10.00 | | 20 | 0-44 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

**Notes and Definitions**

| | |
|---|---|
| Q | Calibration required quadratic regression (Q). |
| > | Greater than. |
| B+ | Blank Spike recovery is above upper control limit (B+). |
| CD+ | Continuing Calibration %Diff/Drift is above control limit (CD+). |
| D | Diluted. |
| ICV+ | Initial Calibration Verification recovery is above upper control limit (ICV+). |
| # | Modified result |
| P | Percent difference between primary and confirmation results exceeds 40% (P). |
| Z18 | Temperature is not within 23 +/-2 ºC. |
| RRF | Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration |
| S+ | Surrogate recovery(ies) above upper control limit (S+). |
| U | Analyte included in the analysis, but not detected |
| WL | Results obtained from a deionized water leach of the sample. |
| XH | Peaks found in the retention time window for MCPP did not confirm by GC/MS. |
| Z-09 | ND |
| LC | Lower value is used due to matrix interferences (LC). |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0050
Date Received: 5/2/2024
Project Due Date: 5/9/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 5.4 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** (Yes) / No / NA
10. Were any analyses received outside of hold time? Yes (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? (Yes) / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? (Yes) / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered
    c. Low Level VOA vials frozen: Date: 5/2/24 Time: 1717 Yes / No To Be Lab Filtered By: SD

Sample Receiving Notes:

COC = G3 0-4' ; Labels = G3 1-4'

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Cassia Dal Ballo Date: 5/3/24 Time: By: ML

Resolution: Chain is correct

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 543637 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 1 | 543647 | Yes | N/A | Yes | 8 oz jar | NP | |
| 1 | 543648 | Yes | N/A | Yes | 8 oz jar | NP | |
| 1 | 543661 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 1 | 543662 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 1 | 543675 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 2 | 543638 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 543649 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 543650 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 543663 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 2 | 543664 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 2 | 543676 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 3 | 543639 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 543651 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 543652 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 543665 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 3 | 543666 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 3 | 543677 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 4 | 543640 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 543653 | Yes | N/A | Yes | 8 oz jar | NP | |

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24E0050
Date Received: 5/2/2024

| | | | | | | |
|---|---|---|---|---|---|---|
| 4 | 543654 | Yes | N/A | Yes | 8 oz jar | NP |
| 4 | 543667 | Yes | N/A | Yes | VOA Vial | DI Water |
| 4 | 543668 | Yes | N/A | Yes | VOA Vial | DI Water |
| 4 | 543678 | Yes | N/A | Yes | VOA Vial | MeOH |
| 5 | 543641 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 5 | 543655 | Yes | N/A | Yes | 8 oz jar | NP |
| 5 | 543656 | Yes | N/A | Yes | 8 oz jar | NP |
| 5 | 543669 | Yes | N/A | Yes | VOA Vial | DI Water |
| 5 | 543670 | Yes | N/A | Yes | VOA Vial | DI Water |
| 5 | 543679 | Yes | N/A | Yes | VOA Vial | MeOH |
| 6 | 543642 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 6 | 543657 | Yes | N/A | Yes | 8 oz jar | NP |
| 6 | 543658 | Yes | N/A | Yes | 8 oz jar | NP |
| 6 | 543671 | Yes | N/A | Yes | VOA Vial | DI Water |
| 6 | 543672 | Yes | N/A | Yes | VOA Vial | DI Water |
| 6 | 543680 | Yes | N/A | Yes | VOA Vial | MeOH |
| 7 | 543643 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 7 | 543659 | Yes | N/A | Yes | 8 oz jar | NP |
| 7 | 543660 | Yes | N/A | Yes | 8 oz jar | NP |
| 7 | 543673 | Yes | N/A | Yes | VOA Vial | DI Water |
| 7 | 543674 | Yes | N/A | Yes | VOA Vial | DI Water |
| 7 | 543681 | Yes | N/A | Yes | VOA Vial | MeOH |
| 8 | 543644 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 9 | 543645 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 10 | 543646 | Yes | N/A | Yes | 4 oz. Jar | NP |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials _____ Yes / No

Are barcode labels on correct containers? Yes / No / NA

Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA

Are all Hex Chrome stickers attached? Yes / No / NA

Are all QC stickers attached? Yes / No / NA

Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: _____ Date & Time: 5/2/24 1709

Reviewed By: _____ Date & Time: 5/2/24 1717

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24E0050

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Is this project for any of the following?: | ○ CT RCP ◉ MA MCP ○ RGP | |
| Reporting Limits | MA LF | |
| Electonic Deliverables | ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD | |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | RCRA8 Metals | PCB | TPH | SVOC - incl pyr | Pest - incl Tox | Herbicides | Reactivity | Conductivity | pH | Free Liquid | Flashpoint | VOC - high | VOC - low |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5-1-24 | 1340 | Composite | Soil | ~~G-5~~ A-5 | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 2 | " | 1320 | Composite | Soil | ~~B-5~~ A-3 | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 3 | " | 1305 | Composite | Soil | ~~E-5~~ A-1 | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 4 | " | 0900 | Composite | Soil | ~~F-5~~ I-3 | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 5 | " | 1410 | Composite | Soil | ~~F-5~~ A-7 | / | / | / | / | / | / | / | / | / | / | / | / | / |
| | | | Composite | Soil | ~~E-5~~ | | | | | | | | | | | | | |
| | | | Composite | Soil | ~~G-5~~ DGB | | | | | | | | | | | | | |
| | | | Composite | Soil | ~~G-5~~ | | | | | | | | | | | | | |
| 6 | 5-1-24 | 0955 | Composite | Soil | G-3 0-4 | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 7 | " " | 1000 | Composite | Soil | G-3 4-8 | X | X | X | X | X | X | X | X | X | X | X | X | X |
| **Container Type:** | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | | | | | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | V | V |
| **Container Volume:** | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | | | | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 7 | 7 |
| **Preservation Code:** | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 10 |
| | | | | | **Number of Containers per Sample:** | 1 | | | | | 1 | | | | | 9 | 1 | 2 |

**Laboratory Use Only**

Cooler Present: yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 5.4 °C 1 Cp

**Sampled by :** DGB + KD

**Comments:** Please specify "Other" preservative and containers types in this space

Run TCLP if fails 20x

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-2-24 1013 | 5/2/24 10:15 | 5/2/24 16:05 | 5/2/24 1605 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
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Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 24E0050

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Is this project for any of the following?: | ○ CT RCP ◉ MA MCP ○ RGP | |

Reporting Limits

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | HOLD |
|---|---|---|---|---|---|---|---|
| 8 | 5-1-24 | 1530 | Grab | Soil | CO 1-2 | X | |
| 9 | " | 1530 | Grab | Soil | CO 4-5 | X | |
| 10 | " | 1530 | Grab | Soil | CO DUP 1-2 | X | |
| | " | 1530 | Grab | Soil | CO DUP 4-5 | | X |
| | | | Grab | Soil | | | |
| | | | Grab | Soil | | | |
| | | | Grab | Soil | | | |
| | | | Grab | Soil | | | |
| | | | Grab | Soil | | | |
| | | | Grab | Soil | | | |

**Container Type:** AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — AG
**Container Volume:** 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10
**Preservation Code:** 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1
**Number of Containers per Sample:**

**Laboratory Use Only**
Cooler Present: YES ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 5.4 °C Ice

**Sampled by :** DB and KD

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-2-24 1015 | 5/2/24 10:20 | 5/2/24 16:05 | 5/2/24 1605 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E0050**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 1:09 pm, Jun 06, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

## SAMPLE RECEIPT

The following samples were received on May 02, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Low Level VOA vials were frozen by ESS Laboratory on 5/02/24 at 17:17.**
**Tetrahydrofuran is reported above the MA CAM reporting limit of 0.010 mg/kg.**

**Question I: All samples for EPH and Metals were analyzed for a subset of the required MCP list per the client's request.**

**Revision 1 June 6, 2024: This report has been revised to include total lead on sample -09.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E0050-01 | A-5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0050-02 | A-3 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0050-03 | A-1 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0050-04 | I-3 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

| | | | |
|---|---|---|---|
| 24E0050-05 | A-7 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0050-06 | G-3 0-4 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0050-07 | G-3 4-8 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0050-08 | CO 1-2 | Soil | 8082A |
| 24E0050-09 | CO 4-5 | Soil | 6010D, 8082A |
| 24E0050-10 | CO DUP 1-2 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

## PROJECT NARRATIVE

**8081B Organochlorine Pesticides**

| | |
|---|---|
| 24E0050-02 | **Lower value is used due to matrix interferences (LC).** |
| | Dieldrin [2C] |
| 24E0050-02 | **Percent difference between primary and confirmation results exceeds 40% (P).** |
| | Dieldrin [2C] |

**8151A Chlorinated Herbicides**

| | |
|---|---|
| 24E0050-01 | **Modified result** |
| | MCPP |
| 24E0050-01 | **Peaks found in the retention time window for MCPP did not confirm by GC/MS.** |
| 24E0050-02 | **Modified result** |
| | MCPP |
| 24E0050-02 | **Peaks found in the retention time window for MCPP did not confirm by GC/MS.** |
| 24E0050-05 | **Modified result** |
| | MCPP |
| 24E0050-05 | **Peaks found in the retention time window for MCPP did not confirm by GC/MS.** |
| 24E0050-07 | **Modified result** |
| | MCPP |
| 24E0050-07 | **Peaks found in the retention time window for MCPP did not confirm by GC/MS.** |

**Semi-Volatile Organic Compounds**

| | |
|---|---|
| 24E0050-01 | **Surrogate recovery(ies) above upper control limit (S+).** |
| | p-Terphenyl-d14 (132% @ 30-130%) |
| 24E0050-06 | **Surrogate recovery(ies) above upper control limit (S+).** |
| | p-Terphenyl-d14 (136% @ 30-130%) |
| D4E0046-CCV1 | **Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration** |
| | 2,4-Dimethylphenol (108% @ 80-120%) |
| D4E0046-CCV1 | **Calibration required quadratic regression (Q).** |
| | 2,4-Dinitrophenol (69% @ 40-160%), Di-n-octylphthalate (99% @ 80-120%) |
| D4E0046-CCV1 | **Continuing Calibration %Diff/Drift is above control limit (CD+).** |
| | Benzo(g,h,i)perylene (23% @ 20%), Indeno(1,2,3-cd)Pyrene (25% @ 20%) |
| D4E0046-CCV1 | **Initial Calibration Verification recovery is above upper control limit (ICV+).** |
| | 2,4-Dimethylphenol |
| D4E0076-CCV1 | **Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration** |
| | 2,4-Dimethylphenol (111% @ 80-120%) |
| D4E0076-CCV1 | **Calibration required quadratic regression (Q).** |
| | 2,4-Dinitrophenol (78% @ 40-160%), Di-n-octylphthalate (124% @ 80-120%) |
| D4E0076-CCV1 | **Continuing Calibration %Diff/Drift is above control limit (CD+).** |
| | Di-n-octylphthalate (24% @ 20%) |
| D4E0076-CCV1 | **Initial Calibration Verification recovery is above upper control limit (ICV+).** |
| | 2,4-Dimethylphenol |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

DE40208-BS1 **Blank Spike recovery is above upper control limit (B+).**
2,4-Dimethylphenol (143% @ 30-130%)

DE40208-BSD1 **Blank Spike recovery is above upper control limit (B+).**
2,4-Dimethylphenol (143% @ 30-130%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E0050-01 through 24E0050-10**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| (x) 8260 VOC CAM II A | (x) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| (x) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | (x) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | (x) MassDEP EPH CAM IV B | (x) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes (x) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? ***Data User Note:*** ***Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*** | Yes ( ) No (x)* |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (x)* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: May 13, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.93** (0.76) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:52 | 2.87 100 | DE40304 |
| **Barium** | **21.0** (0.76) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:52 | 2.87 100 | DE40304 |
| Cadmium | ND (0.38) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:52 | 2.87 100 | DE40304 |
| **Chromium** | **8.58** (0.76) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:52 | 2.87 100 | DE40304 |
| **Lead** | **72.7** (3.79) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:52 | 2.87 100 | DE40304 |
| **Mercury** | **0.150** (0.034) | --- | 7471B | --- | 1 | AFV | 05/03/24 16:52 | 0.63 40 | DE40305 |
| Selenium | ND (3.79) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:52 | 2.87 100 | DE40304 |
| Silver | ND (0.38) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:52 | 2.87 100 | DE40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,1,1-Trichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,1,2,2-Tetrachloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,1,2-Trichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,1-Dichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,1-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,1-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,2,3-Trichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,2,3-Trichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,2,4-Trichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,2,4-Trimethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,2-Dibromoethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,2-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,2-Dichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,2-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,3,5-Trimethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,3-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,3-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,4-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 1,4-Dioxane | ND (0.0954) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 2,2-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 2-Butanone | ND (0.0477) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 2-Chlorotoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 2-Hexanone | ND (0.0477) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 4-Chlorotoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| 4-Isopropyltoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0477) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Acetone | ND (0.0477) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Benzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Bromobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Bromochloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Bromodichloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Bromoform | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Bromomethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Carbon Disulfide | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Carbon Tetrachloride | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Chlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Chloroethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Chloroform | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Chloromethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| cis-1,2-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| cis-1,3-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Dibromochloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Dibromomethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Dichlorodifluoromethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Diethyl Ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Di-isopropyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Ethyl tertiary-butyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Ethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Hexachlorobutadiene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Isopropylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Methyl tert-Butyl Ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Methylene Chloride | ND (0.0238) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| n-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| n-Propylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| sec-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Styrene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| tert-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Tertiary-amyl methyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Tetrachloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Tetrahydrofuran | ND (0.0191) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Toluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| trans-1,2-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| trans-1,3-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Trichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Trichlorofluoromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Vinyl Chloride | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Xylene O | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Xylene P,M | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |
| Xylenes (Total) | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:33 | D4E0096 | DE40605 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *105 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *95 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *101 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 1,2,4-Trichlorobenzene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 1,2-Dichlorobenzene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 1,3-Dichlorobenzene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 1,4-Dichlorobenzene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2,4,5-Trichlorophenol | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2,4,6-Trichlorophenol | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2,4-Dichlorophenol | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2,4-Dimethylphenol | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2,4-Dinitrophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2,4-Dinitrotoluene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2,6-Dinitrotoluene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2-Chloronaphthalene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2-Chlorophenol | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2-Methylnaphthalene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2-Methylphenol | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 2-Nitrophenol | ND (0.561) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 3,3´-Dichlorobenzidine | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 3+4-Methylphenol | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 4-Bromophenyl-phenylether | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 4-Chloroaniline | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| 4-Nitrophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Acenaphthene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Acenaphthylene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Acetophenone | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Aniline | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Anthracene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Benzo(a)anthracene** | **0.514** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Benzo(a)pyrene** | **0.523** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Benzo(b)fluoranthene** | **0.385** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Benzo(g,h,i)perylene** | **0.371** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Benzo(k)fluoranthene** | **0.318** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| bis(2-Chloroethoxy)methane | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| bis(2-Chloroethyl)ether | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| bis(2-chloroisopropyl)Ether | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| bis(2-Ethylhexyl)phthalate | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Butylbenzylphthalate | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Chrysene** | **0.482** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Dibenzo(a,h)Anthracene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Dibenzofuran | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Diethylphthalate | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Dimethylphthalate | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Di-n-butylphthalate | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Di-n-octylphthalate | ND (0.561) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Fluoranthene** | **0.920** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Fluorene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Hexachlorobenzene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Hexachlorobutadiene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Hexachloroethane | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Indeno(1,2,3-cd)Pyrene** | **0.340** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Isophorone | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Naphthalene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Nitrobenzene | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Pentachlorophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Phenanthrene** | **0.583** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Phenol | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| **Pyrene** | **1.07** (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |
| Pyridine | ND (0.280) | --- | 8270E | --- | 1 | TJ | 05/03/24 20:48 | D4E0076 | DE40208 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *91 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *114 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *95 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *102 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *97 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *102 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *95 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *132 %* | *S+* | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 17:45 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 17:45 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 17:45 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 17:45 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 17:45 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/10/24 17:45 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 17:45 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 17:45 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 17:45 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *76 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *69 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 19.8g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 19:35

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| beta-BHC [2C] | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Chlordane (Total) | ND (0.0220) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| **Dieldrin [2C]** | **0.0067** (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |
| Toxaphene | ND (0.137) | --- | 8081B | --- | 1 | 05/03/24 10:50 | D4E0063 | DE40209 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *108 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *89 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |
| 2,4-D | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |
| Dalapon | ND (0.048) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |
| MCPA | ND (2.45) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |
| MCPP | # ND (2.48) | --- | 8151A | --- | 1 | 05/10/24 6:48 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *90 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/2/24 18:46

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **39.1** (11.2) | --- | 8100M | --- | 1 | 05/03/24 16:49 | --- | DE40151 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *81 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5
Date Sampled: 05/01/24 13:40
Percent Solids: 92

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-01
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 141** (5) | --- | 9050A | --- | 1 | LAB | 05/03/24 10:30 | umhos/cm | DE40323 |
| **Corrosivity (pH)** | **8.34** (N/A) | --- | 9045 | --- | 1 | CCP | 05/02/24 19:51 | S.U. | DE40237 |
| **Corrosivity (pH) Sample Temp** | **20.2** | --- | 2550B | --- | 1 | CCP | 05/02/24 19:51 | °C | DE40237 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | JLK | 05/02/24 19:29 | °F | DE40231 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/02/24 20:52 | ml/5 min | DE40257 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.04** (0.82) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:54 | 2.66 100 | DE40304 |
| **Barium** | **63.4** (0.82) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:54 | 2.66 100 | DE40304 |
| **Cadmium** | **0.52** (0.41) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:54 | 2.66 100 | DE40304 |
| **Chromium** | **24.2** (0.82) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:54 | 2.66 100 | DE40304 |
| **Lead** | **164** (4.12) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:54 | 2.66 100 | DE40304 |
| **Mercury** | **0.118** (0.035) | --- | 7471B | --- | 1 | AFV | 05/03/24 16:54 | 0.62 40 | DE40305 |
| Selenium | ND (4.12) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:54 | 2.66 100 | DE40304 |
| Silver | ND (0.41) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:54 | 2.66 100 | DE40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.94** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/07/24 21:54 | 50 50 | DE40722 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,1,1-Trichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,1,2,2-Tetrachloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,1,2-Trichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,1-Dichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,1-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,1-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,2,3-Trichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,2,3-Trichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,2,4-Trichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,2,4-Trimethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,2-Dibromoethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,2-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,2-Dichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,2-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,3,5-Trimethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,3-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,3-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,4-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 1,4-Dioxane | ND (0.0962) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 2,2-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 2-Butanone | ND (0.0481) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 2-Chlorotoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 2-Hexanone | ND (0.0481) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 4-Chlorotoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| 4-Isopropyltoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0481) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Acetone | ND (0.0481) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Benzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Bromobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Bromochloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Bromodichloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Bromoform | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Bromomethane | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Carbon Disulfide | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Carbon Tetrachloride | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Chlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Chloroethane | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Chloroform | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Chloromethane | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| cis-1,2-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| cis-1,3-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Dibromochloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Dibromomethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Dichlorodifluoromethane | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Diethyl Ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Di-isopropyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Ethyl tertiary-butyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Ethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Hexachlorobutadiene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Isopropylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Methyl tert-Butyl Ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Methylene Chloride | ND (0.0240) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| n-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| n-Propylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| sec-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Styrene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| tert-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Tertiary-amyl methyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Tetrachloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Tetrahydrofuran | ND (0.0192) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Toluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| trans-1,2-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| trans-1,3-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Trichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Trichlorofluoromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Vinyl Chloride | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Xylene O | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Xylene P,M | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |
| Xylenes (Total) | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 14:59 | D4E0096 | DE40605 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *109 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *100 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *103 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 1,2,4-Trichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 1,2-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 1,3-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 1,4-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2,4,5-Trichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2,4,6-Trichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2,4-Dichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2,4-Dimethylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2,4-Dinitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2,4-Dinitrotoluene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2,6-Dinitrotoluene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2-Chloronaphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2-Chlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2-Methylnaphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2-Methylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 2-Nitrophenol | ND (0.554) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 3,3´-Dichlorobenzidine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 3+4-Methylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 4-Bromophenyl-phenylether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 4-Chloroaniline | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| 4-Nitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Acenaphthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Acenaphthylene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Acetophenone | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Aniline | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Anthracene** | **1.41** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Benzo(a)anthracene** | **7.33** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Benzo(a)pyrene** | **7.30** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Benzo(b)fluoranthene** | **6.25** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Benzo(g,h,i)perylene** | **4.44** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Benzo(k)fluoranthene** | **4.84** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| bis(2-Chloroethoxy)methane | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| bis(2-Chloroethyl)ether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| bis(2-chloroisopropyl)Ether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| bis(2-Ethylhexyl)phthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Butylbenzylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Chrysene** | **6.28** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Dibenzo(a,h)Anthracene** | **1.28** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Dibenzofuran | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Diethylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Dimethylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Di-n-butylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Di-n-octylphthalate | ND (0.554) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Fluoranthene** | **10.0** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Fluorene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Hexachlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Hexachlorobutadiene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Hexachloroethane | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Indeno(1,2,3-cd)Pyrene** | **5.31** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Isophorone | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Naphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Nitrobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Pentachlorophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Phenanthrene** | **3.82** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Phenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| **Pyrene** | **9.49** (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |
| Pyridine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:18 | D4E0076 | DE40208 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *97 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *114 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *105 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *110 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *106 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *109 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *105 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *129 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 18:04 | --- | DE40918 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 18:04 | --- | DE40918 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 18:04 | --- | DE40918 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 18:04 | --- | DE40918 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 18:04 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.3** (0.06) | --- | 8082A | --- | 1 | 05/10/24 18:04 | --- | DE40918 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 18:04 | --- | DE40918 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 18:04 | --- | DE40918 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 18:04 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 20.1g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 19:35

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| beta-BHC [2C] | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Chlordane (Total) | ND (0.0218) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| **Dieldrin [2C]** | **P, LC 0.0027** (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |
| Toxaphene | ND (0.136) | --- | 8081B | --- | 1 | 05/03/24 11:17 | D4E0063 | DE40209 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *94 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 10.4g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |
| 2,4-D | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |
| Dalapon | ND (0.048) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |
| MCPA | ND (2.45) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |
| MCPP | # ND (2.48) | --- | 8151A | --- | 1 | 05/10/24 7:17 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/2/24 18:46

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **36.2** (10.9) | --- | 8100M | --- | 1 | 05/03/24 17:27 | --- | DE40151 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | 87 % | | 40-140 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 134** (5) | --- | 9050A | --- | 1 | LAB | 05/03/24 10:30 | umhos/cm | DE40323 |
| **Corrosivity (pH)** | **8.08** (N/A) | --- | 9045 | --- | 1 | CCP | 05/02/24 19:51 | S.U. | DE40237 |
| **Corrosivity (pH) Sample Temp** | **20.1** | --- | 2550B | --- | 1 | CCP | 05/02/24 19:51 | °C | DE40237 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | JLK | 05/02/24 19:29 | °F | DE40231 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/02/24 20:52 | ml/5 min | DE40257 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3
Date Sampled: 05/01/24 13:20
Percent Solids: 91
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-02
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/6/24 18:02

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **19.6** (N/A) | --- | 1311 | --- | 1 | RAP | 05/07/24 10:04 | --- | DE40669 |
| **Temperature (Max C)** | **22.1** (N/A) | --- | 1311 | --- | 1 | RAP | 05/07/24 10:04 | --- | DE40669 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.52** (0.82) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:56 | 2.69 100 | DE40304 |
| **Barium** | **10.6** (0.82) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:56 | 2.69 100 | DE40304 |
| Cadmium | ND (0.41) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:56 | 2.69 100 | DE40304 |
| **Chromium** | **7.77** (0.82) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:56 | 2.69 100 | DE40304 |
| **Lead** | **15.8** (4.09) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:56 | 2.69 100 | DE40304 |
| **Mercury** | **0.060** (0.036) | --- | 7471B | --- | 1 | AFV | 05/03/24 16:56 | 0.61 40 | DE40305 |
| Selenium | ND (4.09) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:56 | 2.69 100 | DE40304 |
| Silver | ND (0.41) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:56 | 2.69 100 | DE40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 6.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,1,1-Trichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,1,2,2-Tetrachloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,1,2-Trichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,1-Dichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,1-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,1-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,2,3-Trichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,2,3-Trichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,2,4-Trichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,2,4-Trimethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,2-Dibromoethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,2-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,2-Dichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,2-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,3,5-Trimethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,3-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,3-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,4-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 1,4-Dioxane | ND (0.0859) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 2,2-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 2-Butanone | ND (0.0430) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 2-Chlorotoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 2-Hexanone | ND (0.0430) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 4-Chlorotoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| 4-Isopropyltoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 6.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0430) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Acetone | ND (0.0430) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Benzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Bromobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Bromochloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Bromodichloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Bromoform | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Bromomethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Carbon Disulfide | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Carbon Tetrachloride | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Chlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Chloroethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Chloroform | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Chloromethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| cis-1,2-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| cis-1,3-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Dibromochloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Dibromomethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Dichlorodifluoromethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Diethyl Ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Di-isopropyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Ethyl tertiary-butyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Ethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Hexachlorobutadiene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Isopropylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Methyl tert-Butyl Ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Methylene Chloride | ND (0.0215) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 6.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| n-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| n-Propylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| sec-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Styrene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| tert-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Tertiary-amyl methyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Tetrachloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Tetrahydrofuran | ND (0.0172) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Toluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| trans-1,2-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| trans-1,3-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Trichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Trichlorofluoromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Vinyl Chloride | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Xylene O | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Xylene P,M | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |
| Xylenes (Total) | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:24 | D4E0096 | DE40605 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *106 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *96 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *100 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.029) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 1,2,4-Trichlorobenzene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 1,2-Dichlorobenzene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 1,3-Dichlorobenzene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 1,4-Dichlorobenzene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2,4,5-Trichlorophenol | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2,4,6-Trichlorophenol | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2,4-Dichlorophenol | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2,4-Dimethylphenol | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2,4-Dinitrophenol | ND (1.15) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2,4-Dinitrotoluene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2,6-Dinitrotoluene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2-Chloronaphthalene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2-Chlorophenol | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2-Methylnaphthalene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2-Methylphenol | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 2-Nitrophenol | ND (0.573) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 3,3´-Dichlorobenzidine | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 3+4-Methylphenol | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 4-Bromophenyl-phenylether | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 4-Chloroaniline | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| 4-Nitrophenol | ND (1.15) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Acenaphthene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Acenaphthylene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Acetophenone | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Aniline | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Anthracene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| **Benzo(a)anthracene** | **0.332** (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| **Benzo(a)pyrene** | **0.352** (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Benzo(b)fluoranthene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| **Benzo(g,h,i)perylene** | **0.449** (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Benzo(k)fluoranthene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| bis(2-Chloroethoxy)methane | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| bis(2-Chloroethyl)ether | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| bis(2-chloroisopropyl)Ether | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| bis(2-Ethylhexyl)phthalate | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Butylbenzylphthalate | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| **Chrysene** | **0.311** (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Dibenzo(a,h)Anthracene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Dibenzofuran | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Diethylphthalate | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Dimethylphthalate | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Di-n-butylphthalate | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Di-n-octylphthalate | ND (0.573) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| **Fluoranthene** | **0.693** (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Fluorene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Hexachlorobenzene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Hexachlorobutadiene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Hexachloroethane | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Indeno(1,2,3-cd)Pyrene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Isophorone | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Naphthalene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Nitrobenzene | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Pentachlorophenol | ND (1.15) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| **Phenanthrene** | **0.372** (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Phenol | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| **Pyrene** | **0.638** (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |
| Pyridine | ND (0.286) | --- | 8270E | --- | 1 | TJ | 05/03/24 21:48 | D4E0076 | DE40208 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *100 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *120 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *107 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *114 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *109 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *111 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *108 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *129 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:24 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:24 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:24 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:24 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:24 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:24 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:24 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:24 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:24 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *76 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 19:35

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| 4,4´-DDE | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| 4,4´-DDT | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Aldrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| alpha-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| alpha-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| beta-BHC [2C] | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Chlordane (Total) | ND (0.0222) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| delta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Dieldrin [2C] | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Endosulfan I | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Endosulfan II | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Endosulfan Sulfate | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Endrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Endrin Ketone | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| gamma-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Heptachlor | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Heptachlor Epoxide | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Hexachlorobenzene | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Methoxychlor | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |
| Toxaphene | ND (0.139) | --- | 8081B | --- | 1 | 05/03/24 11:45 | D4E0063 | DE40209 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *107 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *91 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |
| 2,4-D | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |
| Dalapon | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |
| Dinoseb | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |
| MCPA | ND (2.48) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |
| MCPP | ND (2.51) | --- | 8151A | --- | 1 | 05/10/24 7:45 | D4E0188 | DE40659 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *86 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/2/24 18:46

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **31.3** (11.1) | --- | 8100M | --- | 1 | 05/03/24 18:06 | --- | DE40151 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *83 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1
Date Sampled: 05/01/24 13:05
Percent Solids: 91

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-03
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 50** (5) | --- | 9050A | --- | 1 | LAB | 05/03/24 10:30 | umhos/cm | DE40323 |
| **Corrosivity (pH)** | **7.90** (N/A) | --- | 9045 | --- | 1 | CCP | 05/02/24 19:51 | S.U. | DE40237 |
| **Corrosivity (pH) Sample Temp** | **20.2** | --- | 2550B | --- | 1 | CCP | 05/02/24 19:51 | °C | DE40237 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | JLK | 05/02/24 19:29 | °F | DE40231 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/02/24 20:52 | ml/5 min | DE40257 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.58** (0.72) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:58 | 2.99 100 | DE40304 |
| **Barium** | **35.2** (0.72) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:58 | 2.99 100 | DE40304 |
| Cadmium | ND (0.36) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:58 | 2.99 100 | DE40304 |
| **Chromium** | **7.10** (0.72) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:58 | 2.99 100 | DE40304 |
| **Lead** | **34.0** (3.59) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:58 | 2.99 100 | DE40304 |
| **Mercury** | **0.079** (0.031) | --- | 7471B | --- | 1 | AFV | 05/03/24 16:58 | 0.68 40 | DE40305 |
| Selenium | ND (3.59) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:58 | 2.99 100 | DE40304 |
| Silver | ND (0.36) | --- | 6010D | --- | 1 | KJB | 05/03/24 15:58 | 2.99 100 | DE40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,1,1-Trichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,1,2,2-Tetrachloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,1,2-Trichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,1-Dichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,1-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,1-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,2,3-Trichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,2,3-Trichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,2,4-Trichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,2,4-Trimethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,2-Dibromoethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,2-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,2-Dichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,2-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,3,5-Trimethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,3-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,3-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,4-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 1,4-Dioxane | ND (0.0925) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 2,2-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 2-Butanone | ND (0.0463) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 2-Chlorotoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 2-Hexanone | ND (0.0463) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 4-Chlorotoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| 4-Isopropyltoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0463) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Acetone | ND (0.0463) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Benzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Bromobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Bromochloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Bromodichloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Bromoform | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Bromomethane | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Carbon Disulfide | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Carbon Tetrachloride | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Chlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Chloroethane | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Chloroform | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Chloromethane | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| cis-1,2-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| cis-1,3-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Dibromochloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Dibromomethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Dichlorodifluoromethane | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Diethyl Ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Di-isopropyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Ethyl tertiary-butyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Ethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Hexachlorobutadiene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Isopropylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Methyl tert-Butyl Ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Methylene Chloride | ND (0.0231) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| n-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| n-Propylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| sec-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Styrene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| tert-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Tertiary-amyl methyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Tetrachloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Tetrahydrofuran | ND (0.0185) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Toluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| trans-1,2-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| trans-1,3-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Trichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Trichlorofluoromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Vinyl Chloride | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Xylene O | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Xylene P,M | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |
| Xylenes (Total) | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 15:50 | D4E0096 | DE40605 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *108 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *97 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *101 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 1,2,4-Trichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 1,2-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 1,3-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 1,4-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2,4,5-Trichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2,4,6-Trichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2,4-Dichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2,4-Dimethylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2,4-Dinitrophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2,4-Dinitrotoluene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2,6-Dinitrotoluene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2-Chloronaphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2-Chlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2-Methylnaphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2-Methylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 2-Nitrophenol | ND (0.542) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 3,3´-Dichlorobenzidine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 3+4-Methylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 4-Bromophenyl-phenylether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 4-Chloroaniline | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| 4-Nitrophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Acenaphthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Acenaphthylene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Acetophenone | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Aniline | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Benzo(a)anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Benzo(a)pyrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Benzo(b)fluoranthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Benzo(g,h,i)perylene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Benzo(k)fluoranthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| bis(2-Chloroethoxy)methane | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| bis(2-Chloroethyl)ether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| bis(2-chloroisopropyl)Ether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| bis(2-Ethylhexyl)phthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Butylbenzylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Chrysene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Dibenzo(a,h)Anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Dibenzofuran | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Diethylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Dimethylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Di-n-butylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Di-n-octylphthalate | ND (0.542) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| **Fluoranthene** | **0.414** (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Fluorene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Hexachlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Hexachlorobutadiene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Hexachloroethane | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Indeno(1,2,3-cd)Pyrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Isophorone | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Naphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Nitrobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Pentachlorophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Phenanthrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Phenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| **Pyrene** | **0.442** (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |
| Pyridine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:18 | D4E0076 | DE40208 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *86 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *110 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *88 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *100 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *90 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *94 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *90 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *123 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:43 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:43 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:43 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:43 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:43 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:43 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:43 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:43 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 18:43 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *77 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 20.4g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 19:35

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| 4,4´-DDE | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| 4,4´-DDT | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Aldrin | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| alpha-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| alpha-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| beta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Chlordane (Total) | ND (0.0210) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| delta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Dieldrin [2C] | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Endosulfan I | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Endosulfan II | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Endosulfan Sulfate | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Endrin | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Endrin Ketone | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| gamma-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Heptachlor | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Heptachlor Epoxide | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Hexachlorobenzene | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Methoxychlor | ND (0.0026) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |
| Toxaphene | ND (0.132) | --- | 8081B | --- | 1 | 05/03/24 12:13 | D4E0063 | DE40209 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *92 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *86 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 10g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |
| 2,4-D | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |
| Dalapon | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |
| Dinoseb | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |
| MCPA | ND (2.50) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |
| MCPP | ND (2.52) | --- | 8151A | --- | 1 | 05/10/24 8:14 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *87 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/2/24 20:01

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **73.8** (10.7) | --- | 8100M | --- | 1 | 05/03/24 18:44 | --- | DE40243 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *84 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3
Date Sampled: 05/01/24 09:00
Percent Solids: 93

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-04
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 473** (5) | --- | 9050A | --- | 1 | LAB | 05/03/24 10:30 | umhos/cm | DE40323 |
| **Corrosivity (pH)** | **7.96** (N/A) | --- | 9045 | --- | 1 | CCP | 05/02/24 19:51 | S.U. | DE40237 |
| **Corrosivity (pH) Sample Temp** | **20.3** | --- | 2550B | --- | 1 | CCP | 05/02/24 19:51 | °C | DE40237 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | JLK | 05/02/24 19:29 | °F | DE40231 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/02/24 20:59 | ml/5 min | DE40257 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.20** (0.83) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:00 | 2.7 100 | DE40304 |
| **Barium** | **37.5** (0.83) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:00 | 2.7 100 | DE40304 |
| Cadmium | ND (0.42) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:00 | 2.7 100 | DE40304 |
| **Chromium** | **7.62** (0.83) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:00 | 2.7 100 | DE40304 |
| **Lead** | **105** (4.17) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:00 | 2.7 100 | DE40304 |
| **Mercury** | **0.441** (0.033) | --- | 7471B | --- | 1 | AFV | 05/03/24 17:00 | 0.68 40 | DE40305 |
| Selenium | ND (4.17) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:00 | 2.7 100 | DE40304 |
| Silver | ND (0.42) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:00 | 2.7 100 | DE40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **1.12** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/07/24 21:57 | 50 50 | DE40722 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 4.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,1,1-Trichloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,1,2,2-Tetrachloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,1,2-Trichloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,1-Dichloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,1-Dichloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,1-Dichloropropene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,2,3-Trichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,2,3-Trichloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,2,4-Trichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,2,4-Trimethylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,2-Dibromoethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,2-Dichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,2-Dichloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,2-Dichloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,3,5-Trimethylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,3-Dichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,3-Dichloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,4-Dichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 1,4-Dioxane | ND (0.120) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 2,2-Dichloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 2-Butanone | ND (0.0599) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 2-Chlorotoluene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 2-Hexanone | ND (0.0599) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 4-Chlorotoluene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| 4-Isopropyltoluene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 4.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0599) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Acetone | ND (0.0599) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Benzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Bromobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Bromochloromethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Bromodichloromethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Bromoform | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Bromomethane | ND (0.0120) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Carbon Disulfide | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Carbon Tetrachloride | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Chlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Chloroethane | ND (0.0120) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Chloroform | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Chloromethane | ND (0.0120) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| cis-1,2-Dichloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| cis-1,3-Dichloropropene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Dibromochloromethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Dibromomethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Dichlorodifluoromethane | ND (0.0120) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Diethyl Ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Di-isopropyl ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Ethyl tertiary-butyl ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Ethylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Hexachlorobutadiene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Isopropylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Methyl tert-Butyl Ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Methylene Chloride | ND (0.0300) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 4.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| n-Butylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| n-Propylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| sec-Butylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Styrene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| tert-Butylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Tertiary-amyl methyl ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Tetrachloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Tetrahydrofuran | ND (0.0240) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Toluene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| trans-1,2-Dichloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| trans-1,3-Dichloropropene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Trichloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Trichlorofluoromethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Vinyl Chloride | ND (0.0120) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Xylene O | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Xylene P,M | ND (0.0120) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |
| Xylenes (Total) | ND (0.0120) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:16 | D4E0096 | DE40605 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *109 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *97 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *103 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 1,2,4-Trichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 1,2-Dichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 1,3-Dichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 1,4-Dichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2,4,5-Trichlorophenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2,4,6-Trichlorophenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2,4-Dichlorophenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2,4-Dimethylphenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2,4-Dinitrophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2,4-Dinitrotoluene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2,6-Dinitrotoluene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2-Chloronaphthalene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2-Chlorophenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2-Methylnaphthalene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2-Methylphenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 2-Nitrophenol | ND (0.558) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 3,3´-Dichlorobenzidine | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 3+4-Methylphenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 4-Bromophenyl-phenylether | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 4-Chloroaniline | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| 4-Nitrophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Acenaphthene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Acenaphthylene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Acetophenone | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Aniline | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Anthracene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Benzo(a)anthracene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Benzo(a)pyrene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Benzo(b)fluoranthene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Benzo(g,h,i)perylene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Benzo(k)fluoranthene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| bis(2-Chloroethoxy)methane | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| bis(2-Chloroethyl)ether | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| bis(2-chloroisopropyl)Ether | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| bis(2-Ethylhexyl)phthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Butylbenzylphthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Chrysene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Dibenzo(a,h)Anthracene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Dibenzofuran | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Diethylphthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Dimethylphthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Di-n-butylphthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Di-n-octylphthalate | ND (0.558) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Fluoranthene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Fluorene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Hexachlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Hexachlorobutadiene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Hexachloroethane | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Indeno(1,2,3-cd)Pyrene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Isophorone | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Naphthalene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Nitrobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Pentachlorophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Phenanthrene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Phenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Pyrene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |
| Pyridine | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 22:48 | D4E0076 | DE40208 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *100 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *118 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *104 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *111 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *107 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *111 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *105 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *129 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:03 | --- | DE40918 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:03 | --- | DE40918 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:03 | --- | DE40918 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:03 | --- | DE40918 |
| **Aroclor 1248 [2C]** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:03 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.3** (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:03 | --- | DE40918 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:03 | --- | DE40918 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:03 | --- | DE40918 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:03 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 20.1g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 19:35

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **4,4´-DDD** | **0.0082** (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| 4,4´-DDE | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| 4,4´-DDT | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Aldrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| alpha-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| alpha-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| beta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Chlordane (Total) | ND (0.0224) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| delta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Dieldrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Endosulfan I | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Endosulfan II | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Endosulfan Sulfate | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Endrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Endrin Ketone | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| gamma-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Heptachlor | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Heptachlor Epoxide | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Hexachlorobenzene | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Methoxychlor | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |
| Toxaphene | ND (0.140) | --- | 8081B | --- | 1 | 05/03/24 12:40 | D4E0063 | DE40209 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *105 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *92 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |
| 2,4-D | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.053) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |
| Dalapon | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |
| Dinoseb | ND (0.053) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |
| MCPA | ND (2.59) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |
| MCPP | # ND (2.62) | --- | 8151A | --- | 1 | 05/10/24 8:43 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/2/24 20:01

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **14.0** (11.5) | --- | 8100M | --- | 1 | 05/03/24 19:23 | --- | DE40243 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *85 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 51** (5) | --- | 9050A | --- | 1 | LAB | 05/03/24 10:30 | umhos/cm | DE40323 |
| **Corrosivity (pH)** | **8.48** (N/A) | --- | 9045 | --- | 1 | CCP | 05/02/24 19:51 | S.U. | DE40237 |
| **Corrosivity (pH) Sample Temp** | **20.0** | --- | 2550B | --- | 1 | CCP | 05/02/24 19:51 | °C | DE40237 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | JLK | 05/02/24 19:29 | °F | DE40231 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/02/24 20:59 | ml/5 min | DE40257 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-7
Date Sampled: 05/01/24 14:10
Percent Solids: 89
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-05
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/6/24 18:02

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **19.6** (N/A) | --- | 1311 | --- | 1 | RAP | 05/07/24 10:04 | --- | DE40669 |
| **Temperature (Max C)** | **22.1** (N/A) | --- | 1311 | --- | 1 | RAP | 05/07/24 10:04 | --- | DE40669 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.93** (0.75) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:07 | 2.9 100 | DE40304 |
| **Barium** | **21.5** (0.75) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:07 | 2.9 100 | DE40304 |
| Cadmium | ND (0.37) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:07 | 2.9 100 | DE40304 |
| **Chromium** | **10.2** (0.75) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:07 | 2.9 100 | DE40304 |
| **Lead** | **24.2** (3.75) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:07 | 2.9 100 | DE40304 |
| Mercury | ND (0.033) | --- | 7471B | --- | 1 | AFV | 05/03/24 17:02 | 0.65 40 | DE40305 |
| Selenium | ND (3.75) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:07 | 2.9 100 | DE40304 |
| Silver | ND (0.37) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:07 | 2.9 100 | DE40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 5.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,1,1-Trichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,1,2,2-Tetrachloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,1,2-Trichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,1-Dichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,1-Dichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,1-Dichloropropene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,2,3-Trichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,2,3-Trichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,2,4-Trichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,2,4-Trimethylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,2-Dibromoethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,2-Dichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,2-Dichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,2-Dichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,3,5-Trimethylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,3-Dichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,3-Dichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,4-Dichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 1,4-Dioxane | ND (0.0971) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 2,2-Dichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 2-Butanone | ND (0.0485) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 2-Chlorotoluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 2-Hexanone | ND (0.0485) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 4-Chlorotoluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| 4-Isopropyltoluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 5.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0485) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Acetone | ND (0.0485) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Benzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Bromobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Bromochloromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Bromodichloromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Bromoform | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Bromomethane | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Carbon Disulfide | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Carbon Tetrachloride | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Chlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Chloroethane | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Chloroform | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Chloromethane | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| cis-1,2-Dichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| cis-1,3-Dichloropropene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Dibromochloromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Dibromomethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Dichlorodifluoromethane | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Diethyl Ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Di-isopropyl ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Ethyl tertiary-butyl ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Ethylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Hexachlorobutadiene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Isopropylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Methyl tert-Butyl Ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Methylene Chloride | ND (0.0243) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 5.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| n-Butylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| n-Propylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| sec-Butylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Styrene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| tert-Butylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Tertiary-amyl methyl ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Tetrachloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Tetrahydrofuran | ND (0.0194) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Toluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| trans-1,2-Dichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| trans-1,3-Dichloropropene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Trichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Trichlorofluoromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Vinyl Chloride | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Xylene O | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Xylene P,M | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |
| Xylenes (Total) | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 16:41 | D4E0096 | DE40605 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *107 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *98 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *103 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 1,2,4-Trichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 1,2-Dichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 1,3-Dichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 1,4-Dichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2,4,5-Trichlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2,4,6-Trichlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2,4-Dichlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2,4-Dimethylphenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2,4-Dinitrophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2,4-Dinitrotoluene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2,6-Dinitrotoluene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2-Chloronaphthalene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2-Chlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2-Methylnaphthalene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2-Methylphenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 2-Nitrophenol | ND (0.546) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 3,3´-Dichlorobenzidine | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 3+4-Methylphenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 4-Bromophenyl-phenylether | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 4-Chloroaniline | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| 4-Nitrophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Acenaphthene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Acenaphthylene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Acetophenone | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Aniline | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Anthracene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Benzo(a)anthracene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Benzo(a)pyrene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Benzo(b)fluoranthene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Benzo(g,h,i)perylene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Benzo(k)fluoranthene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| bis(2-Chloroethoxy)methane | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| bis(2-Chloroethyl)ether | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| bis(2-chloroisopropyl)Ether | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| bis(2-Ethylhexyl)phthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Butylbenzylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Chrysene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Dibenzo(a,h)Anthracene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Dibenzofuran | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Diethylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Dimethylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Di-n-butylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Di-n-octylphthalate | ND (0.546) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| **Fluoranthene** | **0.581** (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Fluorene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Hexachlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Hexachlorobutadiene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Hexachloroethane | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Indeno(1,2,3-cd)Pyrene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Isophorone | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Naphthalene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Nitrobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Pentachlorophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| **Phenanthrene** | **0.559** (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Phenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| **Pyrene** | **0.560** (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |
| Pyridine | ND (0.273) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:18 | D4E0076 | DE40208 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *99 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *110 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *102 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *113 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *102 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *113 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *103 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *136 %* | *S+* | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 19:22 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 19:22 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 19:22 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 19:22 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 19:22 | --- | DE40918 |
| Aroclor 1254 [2C] | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 19:22 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 19:22 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 19:22 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 19:22 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *70 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 19.4g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/2/24 19:35

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| 4,4´-DDE | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| 4,4´-DDT | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Aldrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| alpha-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| alpha-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| beta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Chlordane (Total) | ND (0.0224) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| delta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Dieldrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Endosulfan I | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Endosulfan II | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Endosulfan Sulfate | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Endrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Endrin Ketone | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| gamma-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Heptachlor | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Heptachlor Epoxide | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Hexachlorobenzene | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Methoxychlor | ND (0.0028) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |
| Toxaphene | ND (0.140) | --- | 8081B | --- | 1 | 05/03/24 13:08 | D4E0063 | DE40209 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *97 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *90 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 10.5g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |
| MCPA | ND (2.41) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |
| MCPP | ND (2.43) | --- | 8151A | --- | 1 | 05/10/24 9:12 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/2/24 20:01

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **19.6** (10.6) | --- | 8100M | --- | 1 | 05/03/24 20:01 | --- | DE40243 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *91 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 0-4
Date Sampled: 05/01/24 09:55
Percent Solids: 92

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-06
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 92** (5) | --- | 9050A | --- | 1 | LAB | 05/03/24 10:30 | umhos/cm | DE40323 |
| **Corrosivity (pH)** | **8.80** (N/A) | --- | 9045 | --- | 1 | CCP | 05/02/24 19:51 | S.U. | DE40237 |
| **Corrosivity (pH) Sample Temp** | **20.0** | --- | 2550B | --- | 1 | CCP | 05/02/24 19:51 | °C | DE40237 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | JLK | 05/02/24 19:29 | °F | DE40231 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/02/24 20:59 | ml/5 min | DE40257 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.95** (0.83) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:09 | 2.7 100 | DE40304 |
| **Barium** | **24.9** (0.83) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:09 | 2.7 100 | DE40304 |
| Cadmium | ND (0.42) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:09 | 2.7 100 | DE40304 |
| **Chromium** | **13.0** (0.83) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:09 | 2.7 100 | DE40304 |
| **Lead** | **59.7** (4.16) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:09 | 2.7 100 | DE40304 |
| **Mercury** | **0.052** (0.035) | --- | 7471B | --- | 1 | AFV | 05/03/24 17:08 | 0.63 40 | DE40305 |
| Selenium | ND (4.16) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:09 | 2.7 100 | DE40304 |
| Silver | ND (0.42) | --- | 6010D | --- | 1 | KJB | 05/03/24 16:09 | 2.7 100 | DE40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 5.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,1,1-Trichloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,1,2,2-Tetrachloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,1,2-Trichloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,1-Dichloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,1-Dichloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,1-Dichloropropene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,2,3-Trichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,2,3-Trichloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,2,4-Trichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,2,4-Trimethylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,2-Dibromoethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,2-Dichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,2-Dichloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,2-Dichloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,3,5-Trimethylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,3-Dichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,3-Dichloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,4-Dichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 1,4-Dioxane | ND (0.102) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 2,2-Dichloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 2-Butanone | ND (0.0511) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 2-Chlorotoluene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 2-Hexanone | ND (0.0511) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 4-Chlorotoluene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| 4-Isopropyltoluene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 5.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0511) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Acetone | ND (0.0511) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Benzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Bromobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Bromochloromethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Bromodichloromethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Bromoform | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Bromomethane | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Carbon Disulfide | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Carbon Tetrachloride | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Chlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Chloroethane | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Chloroform | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Chloromethane | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| cis-1,2-Dichloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| cis-1,3-Dichloropropene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Dibromochloromethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Dibromomethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Dichlorodifluoromethane | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Diethyl Ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Di-isopropyl ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Ethyl tertiary-butyl ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Ethylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Hexachlorobutadiene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Isopropylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Methyl tert-Butyl Ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Methylene Chloride | ND (0.0255) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 5.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| n-Butylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| n-Propylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| sec-Butylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Styrene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| tert-Butylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Tertiary-amyl methyl ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Tetrachloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Tetrahydrofuran | ND (0.0204) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Toluene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| trans-1,2-Dichloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| trans-1,3-Dichloropropene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Trichloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Trichlorofluoromethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Vinyl Chloride | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Xylene O | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Xylene P,M | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |
| Xylenes (Total) | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 17:07 | D4E0096 | DE40605 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *112 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *98 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *104 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.029** (0.028) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 1,2,4-Trichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 1,2-Dichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 1,3-Dichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 1,4-Dichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2,4,5-Trichlorophenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2,4,6-Trichlorophenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2,4-Dichlorophenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2,4-Dimethylphenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2,4-Dinitrophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2,4-Dinitrotoluene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2,6-Dinitrotoluene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2-Chloronaphthalene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2-Chlorophenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2-Methylnaphthalene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2-Methylphenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 2-Nitrophenol | ND (0.559) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 3,3´-Dichlorobenzidine | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 3+4-Methylphenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 4-Bromophenyl-phenylether | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 4-Chloroaniline | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| 4-Nitrophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Acenaphthene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Acenaphthylene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Acetophenone | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Aniline | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Anthracene** | **0.397** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Benzo(a)anthracene** | **0.779** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Benzo(a)pyrene** | **0.802** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Benzo(b)fluoranthene** | **0.550** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Benzo(g,h,i)perylene** | **0.522** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Benzo(k)fluoranthene** | **0.468** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| bis(2-Chloroethoxy)methane | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| bis(2-Chloroethyl)ether | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| bis(2-chloroisopropyl)Ether | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| bis(2-Ethylhexyl)phthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Butylbenzylphthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Chrysene** | **0.774** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Dibenzo(a,h)Anthracene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Dibenzofuran | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Diethylphthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Dimethylphthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Di-n-butylphthalate | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Di-n-octylphthalate | ND (0.559) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Fluoranthene** | **1.39** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Fluorene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Hexachlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Hexachlorobutadiene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Hexachloroethane | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Indeno(1,2,3-cd)Pyrene** | **0.484** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Isophorone | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Naphthalene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Nitrobenzene | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/2/24 19:17

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Pentachlorophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Phenanthrene** | **1.51** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Phenol | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| **Pyrene** | **1.67** (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |
| Pyridine | ND (0.279) | --- | 8270E | --- | 1 | TJ | 05/03/24 23:48 | D4E0076 | DE40208 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *98 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *112 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *102 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *111 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *105 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *108 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *103 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *130 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:42 | --- | DE40918 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:42 | --- | DE40918 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:42 | --- | DE40918 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:42 | --- | DE40918 |
| **Aroclor 1248 [2C]** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:42 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:42 | --- | DE40918 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:42 | --- | DE40918 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:42 | --- | DE40918 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 19:42 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *72 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 19.2g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Aldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0234) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Endrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0018) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |
| Toxaphene | ND (0.146) | --- | 8081B | --- | 1 | 05/07/24 12:02 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *94 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 10g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |
| 2,4-D | ND (0.053) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.053) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |
| Dalapon | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |
| Dicamba | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.053) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |
| Dinoseb | ND (0.053) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |
| MCPA | ND (2.61) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |
| MCPP | # ND (2.64) | --- | 8151A | --- | 1 | 05/10/24 9:41 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/2/24 20:01

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **44.7** (11.7) | --- | 8100M | --- | 1 | 05/03/24 22:35 | --- | DE40243 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *80 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-3 4-8
Date Sampled: 05/01/24 10:00
Percent Solids: 89

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-07
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 156** (5) | --- | 9050A | --- | 1 | LAB | 05/03/24 10:30 | umhos/cm | DE40323 |
| **Corrosivity (pH)** | **8.44** (N/A) | --- | 9045 | --- | 1 | CCP | 05/02/24 19:51 | S.U. | DE40237 |
| **Corrosivity (pH) Sample Temp** | **20.0** | --- | 2550B | --- | 1 | CCP | 05/02/24 19:51 | °C | DE40237 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | JLK | 05/02/24 19:29 | °F | DE40231 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/02/24 21:09 | ml/5 min | DE40257 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 05/03/24 16:22 | mg/kg | DE40342 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CO 1-2
Date Sampled: 05/01/24 15:30
Percent Solids: 92
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 20:01 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 20:01 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 20:01 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 20:01 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 20:01 | --- | DE40918 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 20:01 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 20:01 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 20:01 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 20:01 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CO 4-5
Date Sampled: 05/01/24 15:30
Percent Solids: 79

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-09
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **4210** (90.8) | --- | 6010D | --- | 20 | KJB | 06/05/24 11:57 | 2.8 100 | DF40408 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CO 4-5
Date Sampled: 05/01/24 15:30
Percent Solids: 79
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 20:21 | --- | DE40918 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 20:21 | --- | DE40918 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 20:21 | --- | DE40918 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 20:21 | --- | DE40918 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 20:21 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.3** (0.06) | --- | 8082A | --- | 1 | 05/10/24 20:21 | --- | DE40918 |
| **Aroclor 1260 [2C]** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/10/24 20:21 | --- | DE40918 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 20:21 | --- | DE40918 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 20:21 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *71 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *57 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CO DUP 1-2
Date Sampled: 05/01/24 15:30
Percent Solids: 94
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0050
ESS Laboratory Sample ID: 24E0050-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/12/24 14:13 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/12/24 14:13 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/12/24 14:13 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/12/24 14:13 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/12/24 14:13 | --- | DE40918 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/12/24 14:13 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/12/24 14:13 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/12/24 14:13 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/12/24 14:13 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *93 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *89 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DE40304 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Arsenic | ND | 1.00 | mg/kg wet | | | | | | | |
| Barium | ND | 1.00 | mg/kg wet | | | | | | | |
| Cadmium | ND | 0.50 | mg/kg wet | | | | | | | |
| Chromium | ND | 1.00 | mg/kg wet | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| Selenium | ND | 5.00 | mg/kg wet | | | | | | | |
| Silver | ND | 0.50 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Arsenic | 69.7 | 3.33 | mg/kg wet | 75.60 | | 92 | 80-120 | | | |
| Barium | 747 | 3.33 | mg/kg wet | 372.0 | | 201 | 40-297 | | | |
| Cadmium | 248 | 1.67 | mg/kg wet | 259.0 | | 96 | 80-120 | | | |
| Chromium | 148 | 3.33 | mg/kg wet | 156.0 | | 95 | 80-120 | | | |
| Lead | 206 | 16.7 | mg/kg wet | 225.0 | | 91 | 80-120 | | | |
| Selenium | 76.8 | 16.7 | mg/kg wet | 82.70 | | 93 | 80-120 | | | |
| Silver | 47.5 | 1.67 | mg/kg wet | 51.00 | | 93 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Arsenic | 77.4 | 3.33 | mg/kg wet | 75.60 | | 102 | 80-120 | 10 | 30 | |
| Barium | 779 | 3.33 | mg/kg wet | 372.0 | | 209 | 40-297 | 4 | 30 | |
| Cadmium | 264 | 1.67 | mg/kg wet | 259.0 | | 102 | 80-120 | 6 | 30 | |
| Chromium | 160 | 3.33 | mg/kg wet | 156.0 | | 103 | 80-120 | 8 | 30 | |
| Lead | 223 | 16.7 | mg/kg wet | 225.0 | | 99 | 80-120 | 8 | 30 | |
| Selenium | 83.0 | 16.7 | mg/kg wet | 82.70 | | 100 | 80-120 | 8 | 30 | |
| Silver | 52.0 | 1.67 | mg/kg wet | 51.00 | | 102 | 80-120 | 9 | 30 | |
| **Batch DE40305 - 245.1/7470A** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Mercury | ND | 0.029 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Mercury | 21.4 | 2.91 | mg/kg wet | 25.50 | | 84 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Mercury | 22.7 | 3.14 | mg/kg wet | 25.50 | | 89 | 80-120 | 6 | 30 | |
| **Batch DF40408 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 204 | 16.7 | mg/kg wet | 225.0 | | 91 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 207 | 16.7 | mg/kg wet | 225.0 | | 92 | 80-120 | 2 | 30 | |
| **1311 TCLP Metals** | | | | | | | | | | |
| **Batch DE40722 - 3005A_TCLP** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **1311 TCLP Metals** | | | | | | | | | | |
| **Batch DE40722 - 3005A_TCLP** | | | | | | | | | | |
| Lead | ND | 0.05 | mg/L | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 0.44 | 0.05 | mg/L | 0.5000 | | 88 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 0.44 | 0.05 | mg/L | 0.5000 | | 88 | 80-120 | 0.9 | 20 | |
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dioxane | ND | 0.100 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Acetone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromoform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.0100 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| Carbon Disulfide | ND | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Chloroform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromomethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methylene Chloride | ND | 0.0250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.0050 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 0.0200 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.0100 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.0050 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.0100 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0516* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0491* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0499* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0512* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0511 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,1,1-Trichloroethane | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 0.0527 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 40-160 | | | |
| 1,1,2-Trichloroethane | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| 1,1-Dichloroethane | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| 1,1-Dichloroethene | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| 1,1-Dichloropropene | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,2,3-Trichloropropane | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 0.0519 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0510 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| 1,2-Dibromoethane | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,2-Dichlorobenzene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| 1,2-Dichloroethane | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,2-Dichloropropane | 0.0500 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,3-Dichlorobenzene | 0.0496 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,3-Dichloropropane | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| 1,4-Dichlorobenzene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,4-Dioxane | 1.02 | 0.100 | mg/kg wet | 1.000 | | 102 | 70-130 | | | |
| 2,2-Dichloropropane | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 2-Butanone | 0.299 | 0.0500 | mg/kg wet | 0.2500 | | 119 | 40-160 | | | |
| 2-Chlorotoluene | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 2-Hexanone | 0.303 | 0.0500 | mg/kg wet | 0.2500 | | 121 | 40-160 | | | |
| 4-Chlorotoluene | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 4-Isopropyltoluene | 0.0480 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 0.264 | 0.0500 | mg/kg wet | 0.2500 | | 106 | 40-160 | | | |
| Acetone | 0.384 | 0.0500 | mg/kg wet | 0.2500 | | 154 | 40-160 | | | |
| Benzene | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Bromobenzene | 0.0512 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Bromochloromethane | 0.0496 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| Bromodichloromethane | 0.0580 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | | | |
| Bromoform | 0.0408 | 0.0050 | mg/kg wet | 0.05000 | | 82 | 40-160 | | | |
| Bromomethane | 0.0484 | 0.0100 | mg/kg wet | 0.05000 | | 97 | 40-160 | | | |
| Carbon Disulfide | 0.0520 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Carbon Tetrachloride | 0.0489 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Chlorobenzene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Chloroethane | 0.0488 | 0.0100 | mg/kg wet | 0.05000 | | 98 | 40-160 | | | |
| Chloroform | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Chloromethane | 0.0442 | 0.0100 | mg/kg wet | 0.05000 | | 88 | 40-160 | | | |
| cis-1,2-Dichloroethene | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| cis-1,3-Dichloropropene | 0.0529 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 40-160 | | | |
| Dibromochloromethane | 0.0493 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 40-160 | | | |
| Dibromomethane | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Dichlorodifluoromethane | 0.0301 | 0.0100 | mg/kg wet | 0.05000 | | 60 | 40-160 | | | |
| Diethyl Ether | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Di-isopropyl ether | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 0.0532 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| Ethylbenzene | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| Hexachlorobutadiene | 0.0469 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 40-160 | | | |
| Isopropylbenzene | 0.0551 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| Methyl tert-Butyl Ether | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Methylene Chloride | 0.0453 | 0.0250 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| Naphthalene | 0.0497 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 40-160 | | | |
| n-Butylbenzene | 0.0502 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| n-Propylbenzene | 0.0517 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| sec-Butylbenzene | 0.0472 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| Styrene | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 40-160 | | | |
| tert-Butylbenzene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| Tertiary-amyl methyl ether | 0.0535 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| Tetrachloroethene | 0.0457 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| Tetrahydrofuran | 0.0541 | 0.0200 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Toluene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| trans-1,2-Dichloroethene | 0.0491 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| trans-1,3-Dichloropropene | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Trichloroethene | 0.0479 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Trichlorofluoromethane | 0.0466 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 40-160 | | | |
| Vinyl Chloride | 0.0451 | 0.0100 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| Xylene O | 0.0520 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Xylene P,M | 0.104 | 0.0100 | mg/kg wet | 0.1000 | | 104 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0507* | | mg/kg wet | *0.05000* | | *101* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0499* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0502* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0511* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0489 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 4 | 20 | |
| 1,1,1-Trichloroethane | 0.0475 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 4 | 20 | |
| 1,1,2,2-Tetrachloroethane | 0.0478 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 40-160 | 10 | 20 | |
| 1,1,2-Trichloroethane | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| 1,1-Dichloroethane | 0.0462 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 5 | 20 | |
| 1,1-Dichloroethene | 0.0466 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 4 | 20 | |
| 1,1-Dichloropropene | 0.0451 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | 5 | 20 | |
| 1,2,3-Trichlorobenzene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 4 | 20 | |
| 1,2,3-Trichloropropane | 0.0432 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 70-130 | 8 | 20 | |
| 1,2,4-Trichlorobenzene | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 3 | 20 | |
| 1,2,4-Trimethylbenzene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 1 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 0.0421 | 0.0050 | mg/kg wet | 0.05000 | | 84 | 70-130 | 9 | 20 | |
| 1,2-Dibromoethane | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| 1,2-Dichlorobenzene | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 2 | 20 | |
| 1,2-Dichloroethane | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 5 | 20 | |
| 1,2-Dichloropropane | 0.0478 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 5 | 20 | |
| 1,3,5-Trimethylbenzene | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 2 | 20 | |
| 1,3-Dichlorobenzene | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 3 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| 1,3-Dichloropropane | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 5 | 20 | |
| 1,4-Dichlorobenzene | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 1 | 20 | |
| 1,4-Dioxane | 0.910 | 0.100 | mg/kg wet | 1.000 | | 91 | 70-130 | 11 | 20 | |
| 2,2-Dichloropropane | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 4 | 20 | |
| 2-Butanone | 0.267 | 0.0500 | mg/kg wet | 0.2500 | | 107 | 40-160 | 11 | 20 | |
| 2-Chlorotoluene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 0.6 | 20 | |
| 2-Hexanone | 0.267 | 0.0500 | mg/kg wet | 0.2500 | | 107 | 40-160 | 13 | 20 | |
| 4-Chlorotoluene | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| 4-Isopropyltoluene | 0.0471 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 2 | 20 | |
| 4-Methyl-2-Pentanone | 0.233 | 0.0500 | mg/kg wet | 0.2500 | | 93 | 40-160 | 12 | 20 | |
| Acetone | 0.335 | 0.0500 | mg/kg wet | 0.2500 | | 134 | 40-160 | 14 | 20 | |
| Benzene | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 5 | 20 | |
| Bromobenzene | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 1 | 20 | |
| Bromochloromethane | 0.0479 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 3 | 20 | |
| Bromodichloromethane | 0.0552 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 5 | 20 | |
| Bromoform | 0.0380 | 0.0050 | mg/kg wet | 0.05000 | | 76 | 40-160 | 7 | 20 | |
| Bromomethane | 0.0463 | 0.0100 | mg/kg wet | 0.05000 | | 93 | 40-160 | 4 | 20 | |
| Carbon Disulfide | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 4 | 20 | |
| Carbon Tetrachloride | 0.0467 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 5 | 20 | |
| Chlorobenzene | 0.0484 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 4 | 20 | |
| Chloroethane | 0.0465 | 0.0100 | mg/kg wet | 0.05000 | | 93 | 40-160 | 5 | 20 | |
| Chloroform | 0.0484 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 4 | 20 | |
| Chloromethane | 0.0423 | 0.0100 | mg/kg wet | 0.05000 | | 85 | 40-160 | 4 | 20 | |
| cis-1,2-Dichloroethene | 0.0480 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 5 | 20 | |
| cis-1,3-Dichloropropene | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 40-160 | 5 | 20 | |
| Dibromochloromethane | 0.0468 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 40-160 | 5 | 20 | |
| Dibromomethane | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| Dichlorodifluoromethane | 0.0280 | 0.0100 | mg/kg wet | 0.05000 | | 56 | 40-160 | 7 | 20 | |
| Diethyl Ether | 0.0511 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 5 | 20 | |
| Di-isopropyl ether | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 4 | 20 | |
| Ethyl tertiary-butyl ether | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 5 | 20 | |
| Ethylbenzene | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| Hexachlorobutadiene | 0.0460 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 40-160 | 2 | 20 | |
| Isopropylbenzene | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 2 | 20 | |
| Methyl tert-Butyl Ether | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| Methylene Chloride | 0.0439 | 0.0250 | mg/kg wet | 0.05000 | | 88 | 70-130 | 3 | 20 | |
| Naphthalene | 0.0473 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 40-160 | 5 | 20 | |
| n-Butylbenzene | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| n-Propylbenzene | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 2 | 20 | |
| sec-Butylbenzene | 0.0463 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 2 | 20 | |
| Styrene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 40-160 | 4 | 20 | |
| tert-Butylbenzene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 2 | 20 | |
| Tertiary-amyl methyl ether | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 6 | 20 | |
| Tetrachloroethene | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 5 | 20 | |
| Tetrahydrofuran | 0.0469 | 0.0200 | mg/kg wet | 0.05000 | | 94 | 70-130 | 14 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| Toluene | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 4 | 20 | |
| trans-1,2-Dichloroethene | 0.0464 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 6 | 20 | |
| trans-1,3-Dichloropropene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| Trichloroethene | 0.0462 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 4 | 20 | |
| Trichlorofluoromethane | 0.0445 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 40-160 | 5 | 20 | |
| Vinyl Chloride | 0.0423 | 0.0100 | mg/kg wet | 0.05000 | | 85 | 70-130 | 6 | 20 | |
| Xylene O | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 3 | 20 | |
| Xylene P,M | 0.101 | 0.0100 | mg/kg wet | 0.1000 | | 101 | 70-130 | 3 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0495* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0492* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0493* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0508* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40208 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40208 - 3546** | | | | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyridine | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.23* | | mg/kg wet | *2.500* | | *89* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.20* | | mg/kg wet | *3.750* | | *85* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.44* | | mg/kg wet | *3.750* | | *92* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.40* | | mg/kg wet | *2.500* | | *96* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.53* | | mg/kg wet | *3.750* | | *94* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.35* | | mg/kg wet | *2.500* | | *94* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.43* | | mg/kg wet | *3.750* | | *91* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.74* | | mg/kg wet | *2.500* | | *110* | *30-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.33 | 0.025 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 2.03 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| 1,2-Dichlorobenzene | 2.16 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| 1,3-Dichlorobenzene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.19 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40208 - 3546** | | | | | | | | | | |
| 2,4,5-Trichlorophenol | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 30-130 | | | |
| 2,4-Dichlorophenol | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | | | |
| 2,4-Dimethylphenol | 3.58 | 0.250 | mg/kg wet | 2.500 | | 143 | 30-130 | | | B+ |
| 2,4-Dinitrophenol | 1.86 | 1.00 | mg/kg wet | 2.500 | | 74 | 15-140 | | | |
| 2,4-Dinitrotoluene | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| 2-Chloronaphthalene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| 2-Chlorophenol | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 30-130 | | | |
| 2-Methylnaphthalene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| 2-Methylphenol | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 15-140 | | | |
| 2-Nitrophenol | 2.01 | 0.500 | mg/kg wet | 2.500 | | 81 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| 3+4-Methylphenol | 4.54 | 0.250 | mg/kg wet | 5.000 | | 91 | 15-140 | | | |
| 4-Bromophenyl-phenylether | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | | | |
| 4-Chloroaniline | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 15-140 | | | |
| 4-Nitrophenol | 2.16 | 1.00 | mg/kg wet | 2.500 | | 87 | 15-140 | | | |
| Acenaphthene | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Acenaphthylene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Acetophenone | 2.06 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Aniline | 2.19 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Anthracene | 2.61 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Azobenzene | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Benzo(a)anthracene | 2.61 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Benzo(a)pyrene | 2.66 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.71 | 0.250 | mg/kg wet | 2.500 | | 108 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 2.01 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Butylbenzylphthalate | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| Chrysene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.70 | 0.250 | mg/kg wet | 2.500 | | 108 | 40-140 | | | |
| Dibenzofuran | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Diethylphthalate | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Dimethylphthalate | 2.54 | 0.250 | mg/kg wet | 2.500 | | 101 | 15-140 | | | |
| Di-n-butylphthalate | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Di-n-octylphthalate | 2.60 | 0.500 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Fluoranthene | 2.55 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| Fluorene | 2.51 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Hexachlorobenzene | 2.51 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Hexachlorobutadiene | 2.14 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Hexachloroethane | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40208 - 3546** | | | | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Isophorone | 1.97 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| Naphthalene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Nitrobenzene | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| N-Nitrosodimethylamine | 2.03 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Pentachlorophenol | 2.05 | 1.00 | mg/kg wet | 2.500 | | 82 | 15-140 | | | |
| Phenanthrene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| Phenol | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 15-140 | | | |
| Pyrene | 2.73 | 0.250 | mg/kg wet | 2.500 | | 109 | 40-140 | | | |
| Pyridine | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.19* | | mg/kg wet | *2.500* | | *88* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.88* | | mg/kg wet | *3.750* | | *103* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.39* | | mg/kg wet | *3.750* | | *90* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.44* | | mg/kg wet | *2.500* | | *98* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.42* | | mg/kg wet | *3.750* | | *91* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.10* | | mg/kg wet | *2.500* | | *84* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.35* | | mg/kg wet | *3.750* | | *89* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.74* | | mg/kg wet | *2.500* | | *110* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.37 | 0.025 | mg/kg wet | 2.500 | | 95 | 40-140 | 2 | 30 | |
| 1,2,4-Trichlorobenzene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 0.8 | 30 | |
| 1,2-Dichlorobenzene | 2.16 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 0.4 | 30 | |
| 1,3-Dichlorobenzene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 1 | 30 | |
| 1,4-Dichlorobenzene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | 1 | 30 | |
| 2,4,5-Trichlorophenol | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 30-130 | 1 | 30 | |
| 2,4,6-Trichlorophenol | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 30-130 | 1 | 30 | |
| 2,4-Dichlorophenol | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | 0.3 | 30 | |
| 2,4-Dimethylphenol | 3.57 | 0.250 | mg/kg wet | 2.500 | | 143 | 30-130 | 0.09 | 30 | B+ |
| 2,4-Dinitrophenol | 1.65 | 1.00 | mg/kg wet | 2.500 | | 66 | 15-140 | 12 | 30 | |
| 2,4-Dinitrotoluene | 2.57 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 2 | 30 | |
| 2,6-Dinitrotoluene | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 3 | 30 | |
| 2-Chloronaphthalene | 2.50 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 3 | 30 | |
| 2-Chlorophenol | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 30-130 | 2 | 30 | |
| 2-Methylnaphthalene | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 0.7 | 30 | |
| 2-Methylphenol | 2.36 | 0.250 | mg/kg wet | 2.500 | | 95 | 15-140 | 3 | 30 | |
| 2-Nitrophenol | 2.00 | 0.500 | mg/kg wet | 2.500 | | 80 | 30-130 | 0.6 | 30 | |
| 3,3´-Dichlorobenzidine | 2.58 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 6 | 30 | |
| 3+4-Methylphenol | 4.72 | 0.250 | mg/kg wet | 5.000 | | 94 | 15-140 | 4 | 30 | |
| 4-Bromophenyl-phenylether | 2.76 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | 3 | 30 | |
| 4-Chloroaniline | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 15-140 | 7 | 30 | |
| 4-Nitrophenol | 2.20 | 1.00 | mg/kg wet | 2.500 | | 88 | 15-140 | 2 | 30 | |
| Acenaphthene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 3 | 30 | |
| Acenaphthylene | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 1 | 30 | |
| Acetophenone | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 3 | 30 | |
| Aniline | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 3 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40208 - 3546** | | | | | | | | | | |
| Anthracene | 2.66 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 2 | 30 | |
| Azobenzene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 2 | 30 | |
| Benzo(a)anthracene | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 3 | 30 | |
| Benzo(a)pyrene | 2.73 | 0.250 | mg/kg wet | 2.500 | | 109 | 40-140 | 3 | 30 | |
| Benzo(b)fluoranthene | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 1 | 30 | |
| Benzo(g,h,i)perylene | 2.87 | 0.250 | mg/kg wet | 2.500 | | 115 | 40-140 | 6 | 30 | |
| Benzo(k)fluoranthene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 2 | 30 | |
| bis(2-Chloroethoxy)methane | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 0.6 | 30 | |
| bis(2-Chloroethyl)ether | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 0.2 | 30 | |
| bis(2-chloroisopropyl)Ether | 1.93 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | 1 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 2 | 30 | |
| Butylbenzylphthalate | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 0.6 | 30 | |
| Chrysene | 2.57 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 3 | 30 | |
| Dibenzo(a,h)Anthracene | 2.87 | 0.250 | mg/kg wet | 2.500 | | 115 | 40-140 | 6 | 30 | |
| Dibenzofuran | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 2 | 30 | |
| Diethylphthalate | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 2 | 30 | |
| Dimethylphthalate | 2.55 | 0.250 | mg/kg wet | 2.500 | | 102 | 15-140 | 0.7 | 30 | |
| Di-n-butylphthalate | 2.64 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 2 | 30 | |
| Di-n-octylphthalate | 2.50 | 0.500 | mg/kg wet | 2.500 | | 100 | 40-140 | 4 | 30 | |
| Fluoranthene | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 3 | 30 | |
| Fluorene | 2.55 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 1 | 30 | |
| Hexachlorobenzene | 2.56 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 2 | 30 | |
| Hexachlorobutadiene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 2 | 30 | |
| Hexachloroethane | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 0.2 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.79 | 0.250 | mg/kg wet | 2.500 | | 112 | 40-140 | 7 | 30 | |
| Isophorone | 1.97 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | 0.1 | 30 | |
| Naphthalene | 2.02 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | 1 | 30 | |
| Nitrobenzene | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 0.3 | 30 | |
| N-Nitrosodimethylamine | 2.06 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 1 | 30 | |
| Pentachlorophenol | 2.05 | 1.00 | mg/kg wet | 2.500 | | 82 | 15-140 | 0.3 | 30 | |
| Phenanthrene | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 3 | 30 | |
| Phenol | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 15-140 | 3 | 30 | |
| Pyrene | 2.77 | 0.250 | mg/kg wet | 2.500 | | 111 | 40-140 | 1 | 30 | |
| Pyridine | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 1 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.20* | | mg/kg wet | *2.500* | | *88* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.92* | | mg/kg wet | *3.750* | | *104* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.45* | | mg/kg wet | *3.750* | | *92* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.47* | | mg/kg wet | *2.500* | | *99* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.52* | | mg/kg wet | *3.750* | | *94* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.11* | | mg/kg wet | *2.500* | | *85* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.42* | | mg/kg wet | *3.750* | | *91* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.75* | | mg/kg wet | *2.500* | | *110* | *30-130* | | | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE40918 - 3540C** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE40918 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0226* | | mg/kg wet | *0.02500* | | *90* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0205* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0193* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | 1 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | 0.9 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 2 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | 2 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0191* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40209 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8081B Organochlorine Pesticides | | | | | | | | | | |
| **Batch DE40209 - 3546** | | | | | | | | | | |
| 4,4´-DDD | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDD [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Chlordane (Total) | ND | 0.0200 | mg/kg wet | | | | | | | |
| Chlordane (Total) [2C] | ND | 0.0200 | mg/kg wet | | | | | | | |
| delta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| delta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) [2C] | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Toxaphene | ND | 0.125 | mg/kg wet | | | | | | | |
| Toxaphene [2C] | ND | 0.125 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0139* | | mg/kg wet | *0.01250* | | *111* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40209 - 3546** | | | | | | | | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0139* | | mg/kg wet | *0.01250* | | *111* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0119* | | mg/kg wet | *0.01250* | | *95* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0124* | | mg/kg wet | *0.01250* | | *100* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 4,4´-DDD | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | | | |
| 4,4´-DDD [2C] | 0.0154 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | | | |
| 4,4´-DDE | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | | | |
| 4,4´-DDE [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| 4,4´-DDT | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| 4,4´-DDT [2C] | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| Aldrin | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Aldrin [2C] | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| alpha-BHC | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| alpha-BHC [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| alpha-Chlordane | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | | | |
| alpha-Chlordane [2C] | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| beta-BHC | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | | | |
| beta-BHC [2C] | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| delta-BHC | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| delta-BHC [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| Dieldrin | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| Dieldrin [2C] | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | | | |
| Endosulfan I | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Endosulfan I [2C] | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| Endosulfan II | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | | | |
| Endosulfan II [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| Endosulfan Sulfate | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | | | |
| Endosulfan Sulfate [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| Endrin | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |
| Endrin [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| Endrin Ketone | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | | | |
| Endrin Ketone [2C] | 0.0150 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | | | |
| gamma-BHC (Lindane) | 0.0134 | 0.0015 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| gamma-BHC (Lindane) [2C] | 0.0139 | 0.0015 | mg/kg wet | 0.01250 | | 111 | 40-140 | | | |
| gamma-Chlordane | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | | | |
| gamma-Chlordane [2C] | 0.0151 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | | | |
| Heptachlor | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| Heptachlor [2C] | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| Heptachlor Epoxide | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| Heptachlor Epoxide [2C] | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| Hexachlorobenzene | 0.0124 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | | | |
| Hexachlorobenzene [2C] | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Methoxychlor | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Methoxychlor [2C] | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0133* | | mg/kg wet | *0.01250* | | *106* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40209 - 3546** | | | | | | | | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0133* | | mg/kg wet | *0.01250* | | *107* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0124* | | mg/kg wet | *0.01250* | | *99* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0130* | | mg/kg wet | *0.01250* | | *104* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 4,4´-DDD | 0.0157 | 0.0025 | mg/kg wet | 0.01250 | | 126 | 40-140 | 5 | 30 | |
| 4,4´-DDD [2C] | 0.0162 | 0.0025 | mg/kg wet | 0.01250 | | 129 | 40-140 | 5 | 30 | |
| 4,4´-DDE | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | 4 | 30 | |
| 4,4´-DDE [2C] | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 4 | 30 | |
| 4,4´-DDT | 0.0153 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | 8 | 30 | |
| 4,4´-DDT [2C] | 0.0154 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | 8 | 30 | |
| Aldrin | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 4 | 30 | |
| Aldrin [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 3 | 30 | |
| alpha-BHC | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 4 | 30 | |
| alpha-BHC [2C] | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | 4 | 30 | |
| alpha-Chlordane | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | 3 | 30 | |
| alpha-Chlordane [2C] | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 3 | 30 | |
| beta-BHC | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | 3 | 30 | |
| beta-BHC [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 0.2 | 30 | |
| delta-BHC | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 4 | 30 | |
| delta-BHC [2C] | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 5 | 30 | |
| Dieldrin | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 3 | 30 | |
| Dieldrin [2C] | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | 3 | 30 | |
| Endosulfan I | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | 4 | 30 | |
| Endosulfan I [2C] | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 3 | 30 | |
| Endosulfan II | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 4 | 30 | |
| Endosulfan II [2C] | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 4 | 30 | |
| Endosulfan Sulfate | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 6 | 30 | |
| Endosulfan Sulfate [2C] | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | 7 | 30 | |
| Endrin | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 3 | 30 | |
| Endrin [2C] | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 3 | 30 | |
| Endrin Ketone | 0.0158 | 0.0025 | mg/kg wet | 0.01250 | | 127 | 40-140 | 7 | 30 | |
| Endrin Ketone [2C] | 0.0161 | 0.0025 | mg/kg wet | 0.01250 | | 128 | 40-140 | 7 | 30 | |
| gamma-BHC (Lindane) | 0.0138 | 0.0015 | mg/kg wet | 0.01250 | | 111 | 40-140 | 3 | 30 | |
| gamma-BHC (Lindane) [2C] | 0.0144 | 0.0015 | mg/kg wet | 0.01250 | | 115 | 40-140 | 3 | 30 | |
| gamma-Chlordane | 0.0153 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | 3 | 30 | |
| gamma-Chlordane [2C] | 0.0156 | 0.0025 | mg/kg wet | 0.01250 | | 125 | 40-140 | 3 | 30 | |
| Heptachlor | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 3 | 30 | |
| Heptachlor [2C] | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 4 | 30 | |
| Heptachlor Epoxide | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 3 | 30 | |
| Heptachlor Epoxide [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 3 | 30 | |
| Hexachlorobenzene | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 4 | 30 | |
| Hexachlorobenzene [2C] | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 5 | 30 | |
| Methoxychlor | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 10 | 30 | |
| Methoxychlor [2C] | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 9 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0140* | | mg/kg wet | *0.01250* | | *112* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40209 - 3546** | | | | | | | | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0140* | | mg/kg wet | *0.01250* | | *112* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0126* | | mg/kg wet | *0.01250* | | *101* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0131* | | mg/kg wet | *0.01250* | | *105* | *30-150* | | | |
| **Batch DE40622 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 4,4´-DDD | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDD [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Chlordane (Total) | ND | 0.0200 | mg/kg wet | | | | | | | |
| Chlordane (Total) [2C] | ND | 0.0200 | mg/kg wet | | | | | | | |
| delta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| delta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) [2C] | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.0025 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40622 - 3546** | | | | | | | | | | |
| Hexachlorobenzene [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Toxaphene | ND | 0.125 | mg/kg wet | | | | | | | |
| Toxaphene [2C] | ND | 0.125 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0146* | | mg/kg wet | *0.01250* | | *117* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0146* | | mg/kg wet | *0.01250* | | *117* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0127* | | mg/kg wet | *0.01250* | | *102* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0132* | | mg/kg wet | *0.01250* | | *105* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 4,4´-DDD | 0.0166 | 0.0025 | mg/kg wet | 0.01250 | | 133 | 40-140 | | | |
| 4,4´-DDD [2C] | 0.0172 | 0.0025 | mg/kg wet | 0.01250 | | 138 | 40-140 | | | |
| 4,4´-DDE | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | | | |
| 4,4´-DDE [2C] | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | | | |
| 4,4´-DDT | 0.0154 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | | | |
| 4,4´-DDT [2C] | 0.0156 | 0.0025 | mg/kg wet | 0.01250 | | 125 | 40-140 | | | |
| Aldrin | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Aldrin [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| alpha-BHC | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| alpha-BHC [2C] | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | | | |
| alpha-Chlordane | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| alpha-Chlordane [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| beta-BHC | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| beta-BHC [2C] | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| delta-BHC | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| delta-BHC [2C] | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | | | |
| Dieldrin | 0.0151 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | | | |
| Dieldrin [2C] | 0.0157 | 0.0025 | mg/kg wet | 0.01250 | | 126 | 40-140 | | | |
| Endosulfan I | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Endosulfan I [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| Endosulfan II | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | | | |
| Endosulfan II [2C] | 0.0154 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | | | |
| Endosulfan Sulfate | 0.0155 | 0.0025 | mg/kg wet | 0.01250 | | 124 | 40-140 | | | |
| Endosulfan Sulfate [2C] | 0.0158 | 0.0025 | mg/kg wet | 0.01250 | | 126 | 40-140 | | | |
| Endrin | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | | | |
| Endrin [2C] | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | | | |
| Endrin Ketone | 0.0166 | 0.0025 | mg/kg wet | 0.01250 | | 133 | 40-140 | | | |
| Endrin Ketone [2C] | 0.0166 | 0.0025 | mg/kg wet | 0.01250 | | 132 | 40-140 | | | |
| gamma-BHC (Lindane) | 0.0140 | 0.0015 | mg/kg wet | 0.01250 | | 112 | 40-140 | | | |
| gamma-BHC (Lindane) [2C] | 0.0143 | 0.0015 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| gamma-Chlordane | 0.0156 | 0.0025 | mg/kg wet | 0.01250 | | 125 | 40-140 | | | |
| gamma-Chlordane [2C] | 0.0160 | 0.0025 | mg/kg wet | 0.01250 | | 128 | 40-140 | | | |
| Heptachlor | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| Heptachlor [2C] | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Heptachlor Epoxide | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40622 - 3546** | | | | | | | | | | |
| Heptachlor Epoxide [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| Hexachlorobenzene | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | | | |
| Hexachlorobenzene [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Methoxychlor | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | | | |
| Methoxychlor [2C] | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0150* | | mg/kg wet | *0.01250* | | *120* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0150* | | mg/kg wet | *0.01250* | | *120* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0129* | | mg/kg wet | *0.01250* | | *103* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0132* | | mg/kg wet | *0.01250* | | *106* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 4,4´-DDD | 0.0159 | 0.0025 | mg/kg wet | 0.01250 | | 128 | 40-140 | 4 | 30 | |
| 4,4´-DDD [2C] | 0.0166 | 0.0025 | mg/kg wet | 0.01250 | | 133 | 40-140 | 4 | 30 | |
| 4,4´-DDE | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 3 | 30 | |
| 4,4´-DDE [2C] | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 2 | 30 | |
| 4,4´-DDT | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 3 | 30 | |
| 4,4´-DDT [2C] | 0.0151 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | 3 | 30 | |
| Aldrin | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 1 | 30 | |
| Aldrin [2C] | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 1 | 30 | |
| alpha-BHC | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 1 | 30 | |
| alpha-BHC [2C] | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 1 | 30 | |
| alpha-Chlordane | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 3 | 30 | |
| alpha-Chlordane [2C] | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | 2 | 30 | |
| beta-BHC | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | 2 | 30 | |
| beta-BHC [2C] | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 2 | 30 | |
| delta-BHC | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 3 | 30 | |
| delta-BHC [2C] | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 3 | 30 | |
| Dieldrin | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 3 | 30 | |
| Dieldrin [2C] | 0.0153 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | 3 | 30 | |
| Endosulfan I | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | 3 | 30 | |
| Endosulfan I [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 2 | 30 | |
| Endosulfan II | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 3 | 30 | |
| Endosulfan II [2C] | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 3 | 30 | |
| Endosulfan Sulfate | 0.0150 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | 3 | 30 | |
| Endosulfan Sulfate [2C] | 0.0153 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | 3 | 30 | |
| Endrin | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 3 | 30 | |
| Endrin [2C] | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 3 | 30 | |
| Endrin Ketone | 0.0159 | 0.0025 | mg/kg wet | 0.01250 | | 127 | 40-140 | 4 | 30 | |
| Endrin Ketone [2C] | 0.0159 | 0.0025 | mg/kg wet | 0.01250 | | 127 | 40-140 | 4 | 30 | |
| gamma-BHC (Lindane) | 0.0137 | 0.0015 | mg/kg wet | 0.01250 | | 110 | 40-140 | 2 | 30 | |
| gamma-BHC (Lindane) [2C] | 0.0141 | 0.0015 | mg/kg wet | 0.01250 | | 113 | 40-140 | 2 | 30 | |
| gamma-Chlordane | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | 3 | 30 | |
| gamma-Chlordane [2C] | 0.0157 | 0.0025 | mg/kg wet | 0.01250 | | 125 | 40-140 | 2 | 30 | |
| Heptachlor | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 1 | 30 | |
| Heptachlor [2C] | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 1 | 30 | |
| Heptachlor Epoxide | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 2 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40622 - 3546** | | | | | | | | | | |
| Heptachlor Epoxide [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 2 | 30 | |
| Hexachlorobenzene | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | 0.2 | 30 | |
| Hexachlorobenzene [2C] | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 0.4 | 30 | |
| Methoxychlor | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 5 | 30 | |
| Methoxychlor [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 3 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0138* | | mg/kg wet | *0.01250* | | *110* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0139* | | mg/kg wet | *0.01250* | | *111* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0125* | | mg/kg wet | *0.01250* | | *100* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0128* | | mg/kg wet | *0.01250* | | *102* | *30-150* | | | |
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DE40659 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 2,4,5-T | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-T [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4-D | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-D [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-DB | ND | 0.048 | mg/kg wet | | | | | | | |
| 2,4-DB [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| Dalapon | ND | 0.046 | mg/kg wet | | | | | | | |
| Dalapon [2C] | ND | 0.046 | mg/kg wet | | | | | | | |
| Dicamba | ND | 0.009 | mg/kg wet | | | | | | | |
| Dicamba [2C] | ND | 0.009 | mg/kg wet | | | | | | | |
| Dichlorprop | ND | 0.047 | mg/kg wet | | | | | | | |
| Dichlorprop [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| Dinoseb | ND | 0.048 | mg/kg wet | | | | | | | |
| Dinoseb [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| MCPA | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPA [2C] | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPP | ND | 2.35 | mg/kg wet | | | | | | | |
| MCPP [2C] | ND | 2.35 | mg/kg wet | | | | | | | |
| *Surrogate: DCAA* | *0.149* | | mg/kg wet | *0.2000* | | *74* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.138* | | mg/kg wet | *0.2000* | | *69* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 2,4,5-T | 0.015 | 0.010 | mg/kg wet | 0.01900 | | 78 | 40-140 | | | |
| 2,4,5-T [2C] | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 86 | 40-140 | | | |
| 2,4,5-TP (Silvex) | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 82 | 40-140 | | | |
| 2,4,5-TP (Silvex) [2C] | 0.018 | 0.010 | mg/kg wet | 0.01900 | | 94 | 40-140 | | | |
| 2,4-D | 0.149 | 0.047 | mg/kg wet | 0.1880 | | 79 | 40-140 | | | |
| 2,4-D [2C] | 0.150 | 0.047 | mg/kg wet | 0.1880 | | 80 | 40-140 | | | |
| 2,4-DB | 0.160 | 0.048 | mg/kg wet | 0.1900 | | 84 | 40-140 | | | |
| 2,4-DB [2C] | 0.190 | 0.048 | mg/kg wet | 0.1900 | | 100 | 40-140 | | | |
| Dalapon | 0.339 | 0.046 | mg/kg wet | 0.4550 | | 74 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DE40659 - 3546** | | | | | | | | | | |
| Dalapon [2C] | 0.393 | 0.046 | mg/kg wet | 0.4550 | | 86 | 40-140 | | | |
| Dicamba | 0.015 | 0.009 | mg/kg wet | 0.01880 | | 78 | 40-140 | | | |
| Dicamba [2C] | 0.018 | 0.009 | mg/kg wet | 0.01880 | | 98 | 40-140 | | | |
| Dichlorprop | 0.184 | 0.047 | mg/kg wet | 0.1880 | | 98 | 40-140 | | | |
| Dichlorprop [2C] | 0.186 | 0.047 | mg/kg wet | 0.1880 | | 99 | 40-140 | | | |
| Dinoseb | 0.026 | 0.048 | mg/kg wet | 0.09500 | | 28 | 10-100 | | | |
| Dinoseb [2C] | 0.030 | 0.048 | mg/kg wet | 0.09500 | | 31 | 10-100 | | | |
| MCPA | 15.6 | 2.32 | mg/kg wet | 18.60 | | 84 | 40-140 | | | |
| MCPA [2C] | 18.2 | 2.32 | mg/kg wet | 18.60 | | 98 | 40-140 | | | |
| MCPP | 16.3 | 2.35 | mg/kg wet | 18.80 | | 87 | 40-140 | | | |
| MCPP [2C] | 18.4 | 2.35 | mg/kg wet | 18.80 | | 98 | 40-140 | | | |
| *Surrogate: DCAA* | *0.218* | | mg/kg wet | *0.2000* | | *109* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.206* | | mg/kg wet | *0.2000* | | *103* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 2,4,5-T | 0.013 | 0.010 | mg/kg wet | 0.01900 | | 68 | 40-140 | 14 | 30 | |
| 2,4,5-T [2C] | 0.014 | 0.010 | mg/kg wet | 0.01900 | | 74 | 40-140 | 15 | 30 | |
| 2,4,5-TP (Silvex) | 0.014 | 0.010 | mg/kg wet | 0.01900 | | 72 | 40-140 | 13 | 30 | |
| 2,4,5-TP (Silvex) [2C] | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 82 | 40-140 | 14 | 30 | |
| 2,4-D | 0.134 | 0.047 | mg/kg wet | 0.1880 | | 71 | 40-140 | 11 | 30 | |
| 2,4-D [2C] | 0.130 | 0.047 | mg/kg wet | 0.1880 | | 69 | 40-140 | 14 | 30 | |
| 2,4-DB | 0.144 | 0.048 | mg/kg wet | 0.1900 | | 76 | 40-140 | 11 | 30 | |
| 2,4-DB [2C] | 0.164 | 0.048 | mg/kg wet | 0.1900 | | 86 | 40-140 | 14 | 30 | |
| Dalapon | 0.309 | 0.046 | mg/kg wet | 0.4550 | | 68 | 40-140 | 9 | 30 | |
| Dalapon [2C] | 0.319 | 0.046 | mg/kg wet | 0.4550 | | 70 | 40-140 | 21 | 30 | |
| Dicamba | 0.014 | 0.009 | mg/kg wet | 0.01880 | | 72 | 40-140 | 8 | 30 | |
| Dicamba [2C] | 0.016 | 0.009 | mg/kg wet | 0.01880 | | 86 | 40-140 | 13 | 30 | |
| Dichlorprop | 0.164 | 0.047 | mg/kg wet | 0.1880 | | 87 | 40-140 | 12 | 30 | |
| Dichlorprop [2C] | 0.164 | 0.047 | mg/kg wet | 0.1880 | | 87 | 40-140 | 13 | 30 | |
| Dinoseb | 0.022 | 0.048 | mg/kg wet | 0.09500 | | 23 | 10-100 | 19 | 30 | |
| Dinoseb [2C] | 0.025 | 0.048 | mg/kg wet | 0.09500 | | 26 | 10-100 | 18 | 30 | |
| MCPA | 13.9 | 2.32 | mg/kg wet | 18.60 | | 75 | 40-140 | 11 | 30 | |
| MCPA [2C] | 16.0 | 2.32 | mg/kg wet | 18.60 | | 86 | 40-140 | 13 | 30 | |
| MCPP | 14.5 | 2.35 | mg/kg wet | 18.80 | | 77 | 40-140 | 12 | 30 | |
| MCPP [2C] | 15.8 | 2.35 | mg/kg wet | 18.80 | | 84 | 40-140 | 15 | 30 | |
| *Surrogate: DCAA* | *0.185* | | mg/kg wet | *0.2000* | | *92* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.172* | | mg/kg wet | *0.2000* | | *86* | *30-150* | | | |
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40151 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40151 - 3546** | | | | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *4.44* | | mg/kg wet | *5.000* | | *89* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | | | |
| Docosane (C22) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Dodecane (C12) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Eicosane (C20) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Hexacosane (C26) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Hexadecane (C16) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Nonadecane (C19) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 62 | 30-140 | | | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Octadecane (C18) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Tetracosane (C24) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Tetradecane (C14) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 28.8 | 10.0 | mg/kg wet | 35.00 | | 82 | 40-140 | | | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *4.23* | | mg/kg wet | *5.000* | | *85* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | 4 | 25 | |
| Docosane (C22) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 2 | 25 | |
| Dodecane (C12) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 3 | 25 | |
| Eicosane (C20) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 2 | 25 | |
| Hexacosane (C26) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 0.7 | 25 | |
| Hexadecane (C16) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | 2 | 25 | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 95 | 40-140 | 0.5 | 25 | |
| Nonadecane (C19) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 3 | 25 | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 65 | 30-140 | 5 | 25 | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 0.1 | 25 | |
| Octadecane (C18) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 3 | 25 | |
| Tetracosane (C24) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | 2 | 25 | |
| Tetradecane (C14) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 3 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 29.9 | 10.0 | mg/kg wet | 35.00 | | 85 | 40-140 | 4 | 25 | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 0.3 | 25 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8100M Total Petroleum Hydrocarbons | | | | | | | | | | |
| **Batch DE40151 - 3546** | | | | | | | | | | |
| *Surrogate: O-Terphenyl* | *4.25* | | mg/kg wet | *5.000* | | *85* | *40-140* | | | |
| **Batch DE40243 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *4.10* | | mg/kg wet | *5.000* | | *82* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.7 | 0.2 | mg/kg wet | 2.500 | | 68 | 40-140 | | | |
| Docosane (C22) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Dodecane (C12) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Eicosane (C20) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Hexacosane (C26) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Hexadecane (C16) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Nonadecane (C19) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Nonane (C9) | 1.4 | 0.2 | mg/kg wet | 2.500 | | 58 | 30-140 | | | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Octadecane (C18) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Tetracosane (C24) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| Tetradecane (C14) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 28.6 | 10.0 | mg/kg wet | 35.00 | | 82 | 40-140 | | | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *4.02* | | mg/kg wet | *5.000* | | *80* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 65 | 40-140 | 5 | 25 | |
| Docosane (C22) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 5 | 25 | |
| Dodecane (C12) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | 6 | 25 | |
| Eicosane (C20) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 5 | 25 | |
| Hexacosane (C26) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 4 | 25 | |
| Hexadecane (C16) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 5 | 25 | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 94 | 40-140 | 0.09 | 25 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40243 - 3546** | | | | | | | | | | |
| Nonadecane (C19) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | 5 | 25 | |
| Nonane (C9) | 1.4 | 0.2 | mg/kg wet | 2.500 | | 55 | 30-140 | 4 | 25 | |
| Octacosane (C28) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 3 | 25 | |
| Octadecane (C18) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | 6 | 25 | |
| Tetracosane (C24) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | 4 | 25 | |
| Tetradecane (C14) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | 6 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 27.4 | 10.0 | mg/kg wet | 35.00 | | 78 | 40-140 | 4 | 25 | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 1 | 25 | |
| *Surrogate: O-Terphenyl* | *3.75* | | mg/kg wet | *5.000* | | *75* | *40-140* | | | |
| **Classical Chemistry** | | | | | | | | | | |
| **Batch DE40231 - General Preparation** | | | | | | | | | | |
| **Reference** | | | | | | | | | | |
| Flashpoint | 81 | | °F | 81.00 | | 100 | 97.9-102.1 | | | |
| **Batch DE40323 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Conductivity | ND | 5 | umhos/cm | | | | | | | |
| **LCS** | | | | | | | | | | |
| Conductivity | 1280 | | umhos/cm | 1410 | | 91 | 90-110 | | | |
| **Batch DE40342 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Reactive Cyanide | ND | 2.0 | mg/kg | | | | | | | |
| Reactive Sulfide | ND | 2.0 | mg/kg | | | | | | | |
| **LCS** | | | | | | | | | | |
| Reactive Cyanide | 4.2 | 2.0 | mg/kg | 100.3 | | 4 | 0.68-5.41 | | | |
| Reactive Sulfide | 2.0 | 2.0 | mg/kg | 10.00 | | 20 | 0-44 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

**Notes and Definitions**

| | |
|---|---|
| Q | Calibration required quadratic regression (Q). |
| > | Greater than. |
| B+ | Blank Spike recovery is above upper control limit (B+). |
| CD+ | Continuing Calibration %Diff/Drift is above control limit (CD+). |
| D | Diluted. |
| ICV+ | Initial Calibration Verification recovery is above upper control limit (ICV+). |
| # | Modified result |
| P | Percent difference between primary and confirmation results exceeds 40% (P). |
| Z18 | Temperature is not within 23 +/-2 ºC. |
| RRF | Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration |
| S+ | Surrogate recovery(ies) above upper control limit (S+). |
| U | Analyte included in the analysis, but not detected |
| WL | Results obtained from a deionized water leach of the sample. |
| XH | Peaks found in the retention time window for MCPP did not confirm by GC/MS. |
| Z-09 | ND |
| LC | Lower value is used due to matrix interferences (LC). |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0050

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0050
Date Received: 5/2/2024
Project Due Date: 5/9/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 5.4 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** (Yes) / No / NA
10. Were any analyses received outside of hold time? Yes (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? (Yes) / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? (Yes) / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered
    c. Low Level VOA vials frozen: Date: 5/2/24 Time: 1717 Yes / No To Be Lab Filtered By: SD

Sample Receiving Notes:

COC = G3 0-4' ; Labels = G3 1-4'

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Cassia Dal Ballo Date: 5/3/24 Time: By: ML

Resolution: Chain is correct

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 543637 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 1 | 543647 | Yes | N/A | Yes | 8 oz jar | NP | |
| 1 | 543648 | Yes | N/A | Yes | 8 oz jar | NP | |
| 1 | 543661 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 1 | 543662 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 1 | 543675 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 2 | 543638 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 543649 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 543650 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 543663 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 2 | 543664 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 2 | 543676 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 3 | 543639 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 543651 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 543652 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 543665 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 3 | 543666 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 3 | 543677 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 4 | 543640 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 543653 | Yes | N/A | Yes | 8 oz jar | NP | |

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24E0050
Date Received: 5/2/2024

| | | | | | | |
|---|---|---|---|---|---|---|
| 4 | 543654 | Yes | N/A | Yes | 8 oz jar | NP |
| 4 | 543667 | Yes | N/A | Yes | VOA Vial | DI Water |
| 4 | 543668 | Yes | N/A | Yes | VOA Vial | DI Water |
| 4 | 543678 | Yes | N/A | Yes | VOA Vial | MeOH |
| 5 | 543641 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 5 | 543655 | Yes | N/A | Yes | 8 oz jar | NP |
| 5 | 543656 | Yes | N/A | Yes | 8 oz jar | NP |
| 5 | 543669 | Yes | N/A | Yes | VOA Vial | DI Water |
| 5 | 543670 | Yes | N/A | Yes | VOA Vial | DI Water |
| 5 | 543679 | Yes | N/A | Yes | VOA Vial | MeOH |
| 6 | 543642 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 6 | 543657 | Yes | N/A | Yes | 8 oz jar | NP |
| 6 | 543658 | Yes | N/A | Yes | 8 oz jar | NP |
| 6 | 543671 | Yes | N/A | Yes | VOA Vial | DI Water |
| 6 | 543672 | Yes | N/A | Yes | VOA Vial | DI Water |
| 6 | 543680 | Yes | N/A | Yes | VOA Vial | MeOH |
| 7 | 543643 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 7 | 543659 | Yes | N/A | Yes | 8 oz jar | NP |
| 7 | 543660 | Yes | N/A | Yes | 8 oz jar | NP |
| 7 | 543673 | Yes | N/A | Yes | VOA Vial | DI Water |
| 7 | 543674 | Yes | N/A | Yes | VOA Vial | DI Water |
| 7 | 543681 | Yes | N/A | Yes | VOA Vial | MeOH |
| 8 | 543644 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 9 | 543645 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 10 | 543646 | Yes | N/A | Yes | 4 oz. Jar | NP |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials _____ Yes / No

Are barcode labels on correct containers? Yes / No / NA

Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA

Are all Hex Chrome stickers attached? Yes / No / NA

Are all QC stickers attached? Yes / No / NA

Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: _____ Date & Time: 5/2/24 1709

Reviewed By: _____ Date & Time: 5/2/24 1717

ESS Laboratory
*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 24E0050

| | | | |
|---|---|---|---|
| Turn Time | 5 | Days | |
| Regulatory State | Massachusetts | | |
| Is this project for any of the following?: | ○ CT RCP | ◉ MA MCP | ○ RGP |
| Reporting Limits | MA LF | | |
| Electonic Deliverables | ☑ Data Checker | ☑ Excel | |
| | ☑ Other (Please Specify →) | EDD | |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | RCRA8 Metals | PCB | TPH | SVOC - incl pyr | Pest - incl Tox | Herbicides | Reactivity | Conductivity | pH | Free Liquid | Flashpoint | VOC - high | VOC - low |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5-1-24 | 1340 | Composite | Soil | ~~G-5~~ A-5 | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 2 | " | 1320 | Composite | Soil | ~~B-5~~ A-3 | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 3 | " | 1305 | Composite | Soil | ~~E-5~~ A-1 | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 4 | " | 0900 | Composite | Soil | ~~F-5~~ I-3 | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 5 | " | 1410 | Composite | Soil | ~~F-5~~ A-7 | / | / | / | / | / | / | / | / | / | / | / | / | / |
| | | | Composite | Soil | ~~E-5~~ | | | | | | | | | | | | | |
| | | | Composite | Soil | ~~G-5~~ DGB | | | | | | | | | | | | | |
| | | | Composite | Soil | ~~G-5~~ | | | | | | | | | | | | | |
| 6 | 5-1-24 | 0955 | Composite | Soil | G-3 0-4 | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 7 | " " | 1000 | Composite | Soil | G-3 4-8 | X | X | X | X | X | X | X | X | X | X | X | X | X |
| **Container Type:** | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | | | | | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | V | V |
| **Container Volume:** | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | | | | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 7 | 7 |
| **Preservation Code:** | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 10 |
| | | | | | **Number of Containers per Sample:** | 1 | | | | | 1 | | | | | 9 | 1 | 2 |

**Laboratory Use Only**
Cooler Present: yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 5.4 °C 1 Cp

**Sampled by :** DGB + KD

**Comments:** Please specify "Other" preservative and containers types in this space

Run TCLP if fails 20x

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-2-24 1013 | 5/2/24 10:15 | 5/2/24 16:05 | 5/2/24 1605 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
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www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 24E0050

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Is this project for any of the following?: | ○ CT RCP ◉ MA MCP ○ RGP | |
| Reporting Limits | | |
| Electonic Deliverables | ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD | |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | HOLD | Total Lead |
|---|---|---|---|---|---|---|---|---|
| 8 | 5-1-24 | 1530 | Grab | Soil | CO 1-2 | X | | |
| 9 | " | 1530 | Grab | Soil | CO 4-5 | X | | X |
| 10 | " | 1530 | Grab | Soil | CO DUP 1-2 | X | | |
| | " | 1530 | Grab | Soil | CO DUP 4-5 | | X | |
| | | | Grab | Soil | | | | |
| | | | Grab | Soil | | | | |
| | | | Grab | Soil | | | | |
| | | | Grab | Soil | | | | |
| | | | Grab | Soil | | | | |
| | | | Grab | Soil | | | | |

-JA 6/3/2024

| | | |
|---|---|---|
| **Container Type:** | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | AG |
| **Container Volume:** | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | 10 |
| **Preservation Code:** | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | 1 |
| | **Number of Containers per Sample:** | |

**Laboratory Use Only**

Cooler Present: YES ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 5.4 °C Ice

**Sampled by :** DB and KD

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-2-24 1015 | 5/2/24 10:25 | 5/2/24 16:05 | 5/2/24 1605 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E0051**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

***REVIEWED***
***By ESS Laboratory at 3:56 pm, May 17, 2024***

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

## SAMPLE RECEIPT

The following samples were received on May 02, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E0051-01 | A-0 1-2 | Soil | 8082A |
| 24E0051-02 | A-1 1-2 | Soil | 8082A |
| 24E0051-03 | A-3 1-2 | Soil | 8082A |
| 24E0051-04 | A-5 1-2 | Soil | 8082A |
| 24E0051-05 | A-6 1-2 | Soil | 8082A |
| 24E0051-06 | B-0 1-2 | Soil | 8082A |
| 24E0051-07 | B-1 1-2 | Soil | 8082A |
| 24E0051-08 | B-2 1-2 | Soil | 8082A |
| 24E0051-09 | B-5 1-2 | Soil | 8082A |
| 24E0051-10 | B-6 1-2 | Soil | 8082A |
| 24E0051-11 | A-1 4-5 | Soil | 8082A |
| 24E0051-12 | A-3 4-5 | Soil | 8082A |
| 24E0051-13 | A-5 4-5 | Soil | 8082A |
| 24E0051-14 | A-6 4-5 | Soil | 8082A |
| 24E0051-15 | B-1 4-5 | Soil | 8082A |
| 24E0051-16 | B-2 4-5 | Soil | 8082A |
| 24E0051-17 | B-5 4-5 | Soil | 8082A |
| 24E0051-18 | A-6 DUP 1-2 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**

24E0051-06 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

DE41504-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
Aroclor 1260 (31% @ 30%), Aroclor 1260 [2C] (35% @ 30%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E0051-01 through 24E0051-18**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes ( x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: May 17, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-0 1-2
Date Sampled: 05/01/24 12:55
Percent Solids: 96
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:00 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:00 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:00 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:00 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:00 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.4** (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:00 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:00 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:00 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:00 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *74 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1 1-2
Date Sampled: 05/01/24 13:05
Percent Solids: 94
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:19 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:19 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:19 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:19 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:19 | --- | DE40918 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:19 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:19 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:19 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:19 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *76 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3 1-2
Date Sampled: 05/01/24 13:20
Percent Solids: 93
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:39 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:39 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:39 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:39 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:39 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.4** (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:39 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:39 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:39 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:39 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5 1-2
Date Sampled: 05/01/24 13:40
Percent Solids: 93
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:59 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:59 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:59 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:59 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:59 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.3** (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:59 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:59 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:59 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:59 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-6 1-2
Date Sampled: 05/01/24 14:00
Percent Solids: 94
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:18 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:18 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:18 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:18 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:18 | --- | DE40918 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:18 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:18 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:18 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:18 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-0 1-2
Date Sampled: 05/01/24 15:20
Percent Solids: 84
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (5.8) | --- | 8082A | --- | 100 | 05/12/24 14:32 | --- | DE40918 |
| Aroclor 1221 | ND (5.8) | --- | 8082A | --- | 100 | 05/12/24 14:32 | --- | DE40918 |
| Aroclor 1232 | ND (5.8) | --- | 8082A | --- | 100 | 05/12/24 14:32 | --- | DE40918 |
| Aroclor 1242 | ND (5.8) | --- | 8082A | --- | 100 | 05/12/24 14:32 | --- | DE40918 |
| Aroclor 1248 | ND (5.8) | --- | 8082A | --- | 100 | 05/12/24 14:32 | --- | DE40918 |
| **Aroclor 1254** | **102** (5.8) | --- | 8082A | --- | 100 | 05/12/24 14:32 | --- | DE40918 |
| Aroclor 1260 | ND (5.8) | --- | 8082A | --- | 100 | 05/12/24 14:32 | --- | DE40918 |
| Aroclor 1262 | ND (5.8) | --- | 8082A | --- | 100 | 05/12/24 14:32 | --- | DE40918 |
| Aroclor 1268 | ND (5.8) | --- | 8082A | --- | 100 | 05/12/24 14:32 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *%* | *SD* | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *%* | *SD* | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-1 1-2
Date Sampled: 05/01/24 15:10
Percent Solids: 95
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:57 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:57 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:57 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:57 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:57 | --- | DE40918 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:57 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:57 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:57 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:57 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-2 1-2
Date Sampled: 05/01/24 14:55
Percent Solids: 93
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:17 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:17 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:17 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:17 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:17 | --- | DE40918 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:17 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:17 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:17 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:17 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *79 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-5 1-2
Date Sampled: 05/01/24 14:35
Percent Solids: 92
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 23:36 | --- | DE40918 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 23:36 | --- | DE40918 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 23:36 | --- | DE40918 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 23:36 | --- | DE40918 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 23:36 | --- | DE40918 |
| Aroclor 1254 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 23:36 | --- | DE40918 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 23:36 | --- | DE40918 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 23:36 | --- | DE40918 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 23:36 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-6 1-2
Date Sampled: 05/01/24 14:20
Percent Solids: 92
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:56 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:56 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:56 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:56 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:56 | --- | DE40918 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:56 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:56 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:56 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:56 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1 4-5
Date Sampled: 05/01/24 13:05
Percent Solids: 89
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:15 | --- | DE41008 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:15 | --- | DE41008 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:15 | --- | DE41008 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:15 | --- | DE41008 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:15 | --- | DE41008 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:15 | --- | DE41008 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:15 | --- | DE41008 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:15 | --- | DE41008 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:15 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *61 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *56 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3 4-5
Date Sampled: 05/01/24 13:20
Percent Solids: 85
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:54 | --- | DE41008 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:54 | --- | DE41008 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:54 | --- | DE41008 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:54 | --- | DE41008 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:54 | --- | DE41008 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:54 | --- | DE41008 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:54 | --- | DE41008 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:54 | --- | DE41008 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:54 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *63 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5 4-5
Date Sampled: 05/01/24 13:40
Percent Solids: 90
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/15/24 11:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 23:46 | --- | DE41504 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 23:46 | --- | DE41504 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 23:46 | --- | DE41504 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 23:46 | --- | DE41504 |
| **Aroclor 1248 [2C]** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/16/24 23:46 | --- | DE41504 |
| **Aroclor 1254** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/16/24 23:46 | --- | DE41504 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 23:46 | --- | DE41504 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 23:46 | --- | DE41504 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 23:46 | --- | DE41504 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *64 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *51 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-6 4-5
Date Sampled: 05/01/24 14:00
Percent Solids: 76
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.07) | --- | 8082A | --- | 1 | 05/13/24 15:34 | --- | DE41008 |
| Aroclor 1221 | ND (0.07) | --- | 8082A | --- | 1 | 05/13/24 15:34 | --- | DE41008 |
| Aroclor 1232 | ND (0.07) | --- | 8082A | --- | 1 | 05/13/24 15:34 | --- | DE41008 |
| Aroclor 1242 | ND (0.07) | --- | 8082A | --- | 1 | 05/13/24 15:34 | --- | DE41008 |
| Aroclor 1248 | ND (0.07) | --- | 8082A | --- | 1 | 05/13/24 15:34 | --- | DE41008 |
| **Aroclor 1254** | **0.09** (0.07) | --- | 8082A | --- | 1 | 05/13/24 15:34 | --- | DE41008 |
| Aroclor 1260 | ND (0.07) | --- | 8082A | --- | 1 | 05/13/24 15:34 | --- | DE41008 |
| Aroclor 1262 | ND (0.07) | --- | 8082A | --- | 1 | 05/13/24 15:34 | --- | DE41008 |
| Aroclor 1268 | ND (0.07) | --- | 8082A | --- | 1 | 05/13/24 15:34 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *56 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *57 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-1 4-5
Date Sampled: 05/01/24 15:10
Percent Solids: 90
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 15:54 | --- | DE41008 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 15:54 | --- | DE41008 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 15:54 | --- | DE41008 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 15:54 | --- | DE41008 |
| **Aroclor 1248 [2C]** | **0.3** (0.05) | --- | 8082A | --- | 1 | 05/13/24 15:54 | --- | DE41008 |
| **Aroclor 1254** | **0.4** (0.05) | --- | 8082A | --- | 1 | 05/13/24 15:54 | --- | DE41008 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 15:54 | --- | DE41008 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 15:54 | --- | DE41008 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 15:54 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *63 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *58 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-2 4-5
Date Sampled: 05/01/24 14:55
Percent Solids: 93
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:13 | --- | DE41008 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:13 | --- | DE41008 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:13 | --- | DE41008 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:13 | --- | DE41008 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:13 | --- | DE41008 |
| **Aroclor 1254** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:13 | --- | DE41008 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:13 | --- | DE41008 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:13 | --- | DE41008 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:13 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *66 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-5 4-5
Date Sampled: 05/01/24 14:35
Percent Solids: 92
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:33 | --- | DE41008 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:33 | --- | DE41008 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:33 | --- | DE41008 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:33 | --- | DE41008 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:33 | --- | DE41008 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:33 | --- | DE41008 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:33 | --- | DE41008 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:33 | --- | DE41008 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:33 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *70 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-6 DUP 1-2
Date Sampled: 05/01/24 14:00
Percent Solids: 95
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:53 | --- | DE41008 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:53 | --- | DE41008 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:53 | --- | DE41008 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:53 | --- | DE41008 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:53 | --- | DE41008 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:53 | --- | DE41008 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:53 | --- | DE41008 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:53 | --- | DE41008 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:53 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *68 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE40918 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0226* | | mg/kg wet | *0.02500* | | *90* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0205* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0193* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | 1 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | 0.9 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 2 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | 2 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0191* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| **Batch DE41008 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE41008 - 3540C** | | | | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0211* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0204* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0178* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0189* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 80 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0205* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0196* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0184* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0186* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | 9 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | 9 | 30 | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 93 | 40-140 | 11 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 96 | 40-140 | 13 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0229* | | mg/kg wet | *0.02500* | | *92* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0222* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| **Matrix Spike** **Source: 24E0051-18** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg dry | 0.5209 | ND | 89 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg dry | 0.5209 | ND | 79 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg dry | 0.5209 | ND | 86 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg dry | 0.5209 | ND | 77 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE41008 - 3540C** | | | | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0202* | | mg/kg dry | *0.02605* | | *78* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0186* | | mg/kg dry | *0.02605* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0195* | | mg/kg dry | *0.02605* | | *75* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0198* | | mg/kg dry | *0.02605* | | *76* | *30-150* | | | |
| **Matrix Spike Dup Source: 24E0051-18** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg dry | 0.5209 | ND | 92 | 40-140 | 3 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg dry | 0.5209 | ND | 84 | 40-140 | 6 | 30 | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg dry | 0.5209 | ND | 89 | 40-140 | 3 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg dry | 0.5209 | ND | 81 | 40-140 | 4 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0211* | | mg/kg dry | *0.02605* | | *81* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0192* | | mg/kg dry | *0.02605* | | *74* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0205* | | mg/kg dry | *0.02605* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0210* | | mg/kg dry | *0.02605* | | *81* | *30-150* | | | |
| **Batch DE41504 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0184* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0155* | | mg/kg wet | *0.02500* | | *62* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0176* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0182* | | mg/kg wet | *0.02500* | | *73* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 99 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 92 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 100 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 97 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0226* | | mg/kg wet | *0.02500* | | *90* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0204* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE41504 - 3540C** | | | | | | | | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0209* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0206* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 16 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 70 | 40-140 | 27 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 73 | 40-140 | 31 | 30 | D+ |
| Aroclor 1260 [2C] | 0.3 | 0.05 | mg/kg wet | 0.5000 | | 68 | 40-140 | 35 | 30 | D+ |
| *Surrogate: Decachlorobiphenyl* | *0.0174* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0145* | | mg/kg wet | *0.02500* | | *58* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0179* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0171* | | mg/kg wet | *0.02500* | | *68* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| SD | Surrogate recovery(ies) diluted below the MRL (SD). |
| D+ | Relative percent difference for duplicate is outside of criteria (D+). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0051
Date Received: 5/2/2024
Project Due Date: 5/9/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 5.4 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 543682 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 543683 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 543684 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 543685 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 543686 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 543687 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 543688 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 8 | 543689 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 9 | 543690 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 10 | 543691 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 11 | 543692 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 12 | 543693 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 13 | 543694 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 14 | 543695 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 15 | 543696 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 16 | 543697 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 17 | 543698 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 18 | 543699 | Yes | N/A | Yes | 4 oz. Jar | NP | |

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24E0051
Date Received: 5/2/2024

**2nd Review**
**Were all containers scanned into storage/lab?** Initials: dl

| | |
|---|---|
| Are barcode labels on correct containers? | Yes / No |
| Are all Flashpoint stickers attached/container ID # circled? | Yes / No / NA |
| Are all Hex Chrome stickers attached? | Yes / No / NA |
| Are all QC stickers attached? | Yes / No / NA |
| Are VOA stickers attached if bubbles noted? | Yes / No / NA |

Completed By: [signature] Date & Time: 5/2/24 1700

Reviewed By: [signature] Date & Time: 5/2/24 1715.

# CHAIN OF CUSTODY


ESS Laboratory
*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com


ESS Lab # 24E0051

Reporting Limits

Electonic Deliverables: ☑ Data Checker ☑ Other (Please Specify →) ☑ Excel EDD

Turn Time: 5 Days

Regulatory State: Massachusetts

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

Company Name: Civil and Environmental Consultants

Project #: 332-344

Project Name: MassCEC Phase III - Site 1

Contact Person: Cassia Dal Bello

Address: 31 Bellows Road

City: Raynham

State: MA

Zip Code: 02767

PO #:

Telephone Number: 774-501-2176

FAX Number:

Email Address: cdalbello; jkitchen, dbarboza@cecinc.com

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: PCB | | |

ESS Laboratory
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# CHAIN OF CUSTODY

ESS Lab # 24E0051

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Reporting Limits | | |

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis: PCB; ~~MS/MSD~~; MS/MSD; HOLD

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | MS/MSD | HOLD |
|---|---|---|---|---|---|---|---|---|
| 11 | 5-1-24 CDB | 13:05 CDB | Grab | Soil | A-1 4-5 | X | | |
| 12 | | 13:20 | Grab | Soil | A-3 4-5 | X | | |
| 13 | | 13:40 | Grab | Soil | A-5 4-5 | X | | |
| 14 | | 14:00 | Grab | Soil | A-6 4-5 | X | | |
| 15 | | 15:10 | Grab | Soil | B-1 4-5 | X | | |
| 16 | | 14:55 | Grab | Soil | B-2 4-5 | X | | |
| 17 | | 14:35 | Grab | Soil | B-5 4-5 | X | | |
| 18 | | 14:00 | Grab | Soil | A-6 DUP 1-2 | X | X | |
| — | | 14:00 | Grab | Soil | A-6 DUP 4-5 | | X | X |
| | | | Grab | Soil | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* 10 |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* 1 |
| | | | | | | | | | | **Number of Containers per Sample:** | |

**Laboratory Use Only**

Cooler Present: yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 5.4 °C ice

**Sampled by :** DB and KD

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-1-24 1015 | 5/2/24 10:15 | 5/2/24 10:15 | 5/2/24 1605 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E0051**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 1:42 pm, Jun 13, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

## SAMPLE RECEIPT

The following samples were received on May 02, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Revision 1 June 13, 2024: This report has been revised to include total lead on sample -15.**

**Question I: All samples for metals were analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E0051-01 | A-0 1-2 | Soil | 8082A |
| 24E0051-02 | A-1 1-2 | Soil | 8082A |
| 24E0051-03 | A-3 1-2 | Soil | 8082A |
| 24E0051-04 | A-5 1-2 | Soil | 8082A |
| 24E0051-05 | A-6 1-2 | Soil | 8082A |
| 24E0051-06 | B-0 1-2 | Soil | 8082A |
| 24E0051-07 | B-1 1-2 | Soil | 8082A |
| 24E0051-08 | B-2 1-2 | Soil | 8082A |
| 24E0051-09 | B-5 1-2 | Soil | 8082A |
| 24E0051-10 | B-6 1-2 | Soil | 8082A |
| 24E0051-11 | A-1 4-5 | Soil | 8082A |
| 24E0051-12 | A-3 4-5 | Soil | 8082A |
| 24E0051-13 | A-5 4-5 | Soil | 8082A |
| 24E0051-14 | A-6 4-5 | Soil | 8082A |
| 24E0051-15 | B-1 4-5 | Soil | 6010D, 8082A |
| 24E0051-16 | B-2 4-5 | Soil | 8082A |
| 24E0051-17 | B-5 4-5 | Soil | 8082A |
| 24E0051-18 | A-6 DUP 1-2 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**

24E0051-06 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

DE41504-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
Aroclor 1260 (31% @ 30%), Aroclor 1260 [2C] (35% @ 30%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E0051-01 through 24E0051-18**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes ( x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (x)* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: May 17, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-0 1-2
Date Sampled: 05/01/24 12:55
Percent Solids: 96
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:00 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:00 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:00 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:00 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:00 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.4** (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:00 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:00 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:00 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:00 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *74 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1 1-2
Date Sampled: 05/01/24 13:05
Percent Solids: 94
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:19 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:19 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:19 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:19 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:19 | --- | DE40918 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:19 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:19 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:19 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:19 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *76 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3 1-2
Date Sampled: 05/01/24 13:20
Percent Solids: 93
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:39 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:39 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:39 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:39 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:39 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.4** (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:39 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:39 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:39 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:39 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5 1-2
Date Sampled: 05/01/24 13:40
Percent Solids: 93
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:59 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:59 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:59 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:59 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:59 | --- | DE40918 |
| **Aroclor 1254 [2C]** | **0.3** (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:59 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:59 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:59 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 21:59 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-6 1-2
Date Sampled: 05/01/24 14:00
Percent Solids: 94
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:18 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:18 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:18 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:18 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:18 | --- | DE40918 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:18 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:18 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:18 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:18 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-0 1-2
Date Sampled: 05/01/24 15:20
Percent Solids: 84
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (5.8) | --- | 8082A | --- | 100 | 05/12/24 14:32 | --- | DE40918 |
| Aroclor 1221 | ND (5.8) | --- | 8082A | --- | 100 | 05/12/24 14:32 | --- | DE40918 |
| Aroclor 1232 | ND (5.8) | --- | 8082A | --- | 100 | 05/12/24 14:32 | --- | DE40918 |
| Aroclor 1242 | ND (5.8) | --- | 8082A | --- | 100 | 05/12/24 14:32 | --- | DE40918 |
| Aroclor 1248 | ND (5.8) | --- | 8082A | --- | 100 | 05/12/24 14:32 | --- | DE40918 |
| **Aroclor 1254** | **102** (5.8) | --- | 8082A | --- | 100 | 05/12/24 14:32 | --- | DE40918 |
| Aroclor 1260 | ND (5.8) | --- | 8082A | --- | 100 | 05/12/24 14:32 | --- | DE40918 |
| Aroclor 1262 | ND (5.8) | --- | 8082A | --- | 100 | 05/12/24 14:32 | --- | DE40918 |
| Aroclor 1268 | ND (5.8) | --- | 8082A | --- | 100 | 05/12/24 14:32 | --- | DE40918 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | % | SD | 30-150 |
| *Surrogate: Tetrachloro-m-xylene* | % | SD | 30-150 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-1 1-2
Date Sampled: 05/01/24 15:10
Percent Solids: 95
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:57 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:57 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:57 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:57 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:57 | --- | DE40918 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:57 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:57 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:57 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 22:57 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-2 1-2
Date Sampled: 05/01/24 14:55
Percent Solids: 93
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:17 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:17 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:17 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:17 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:17 | --- | DE40918 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:17 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:17 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:17 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:17 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *79 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-5 1-2
Date Sampled: 05/01/24 14:35
Percent Solids: 92
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 23:36 | --- | DE40918 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 23:36 | --- | DE40918 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 23:36 | --- | DE40918 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 23:36 | --- | DE40918 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 23:36 | --- | DE40918 |
| Aroclor 1254 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 23:36 | --- | DE40918 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 23:36 | --- | DE40918 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 23:36 | --- | DE40918 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/10/24 23:36 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-6 1-2
Date Sampled: 05/01/24 14:20
Percent Solids: 92
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/9/24 12:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:56 | --- | DE40918 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:56 | --- | DE40918 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:56 | --- | DE40918 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:56 | --- | DE40918 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:56 | --- | DE40918 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:56 | --- | DE40918 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:56 | --- | DE40918 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:56 | --- | DE40918 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/10/24 23:56 | --- | DE40918 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1 4-5
Date Sampled: 05/01/24 13:05
Percent Solids: 89
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:15 | --- | DE41008 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:15 | --- | DE41008 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:15 | --- | DE41008 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:15 | --- | DE41008 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:15 | --- | DE41008 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:15 | --- | DE41008 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:15 | --- | DE41008 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:15 | --- | DE41008 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:15 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *61 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *56 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3 4-5
Date Sampled: 05/01/24 13:20
Percent Solids: 85
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:54 | --- | DE41008 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:54 | --- | DE41008 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:54 | --- | DE41008 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:54 | --- | DE41008 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:54 | --- | DE41008 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:54 | --- | DE41008 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:54 | --- | DE41008 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:54 | --- | DE41008 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 14:54 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *63 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5 4-5
Date Sampled: 05/01/24 13:40
Percent Solids: 90
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/15/24 11:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 23:46 | --- | DE41504 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 23:46 | --- | DE41504 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 23:46 | --- | DE41504 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 23:46 | --- | DE41504 |
| **Aroclor 1248 [2C]** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/16/24 23:46 | --- | DE41504 |
| **Aroclor 1254** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/16/24 23:46 | --- | DE41504 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 23:46 | --- | DE41504 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 23:46 | --- | DE41504 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 23:46 | --- | DE41504 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *64 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *51 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-6 4-5
Date Sampled: 05/01/24 14:00
Percent Solids: 76
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.07) | --- | 8082A | --- | 1 | 05/13/24 15:34 | --- | DE41008 |
| Aroclor 1221 | ND (0.07) | --- | 8082A | --- | 1 | 05/13/24 15:34 | --- | DE41008 |
| Aroclor 1232 | ND (0.07) | --- | 8082A | --- | 1 | 05/13/24 15:34 | --- | DE41008 |
| Aroclor 1242 | ND (0.07) | --- | 8082A | --- | 1 | 05/13/24 15:34 | --- | DE41008 |
| Aroclor 1248 | ND (0.07) | --- | 8082A | --- | 1 | 05/13/24 15:34 | --- | DE41008 |
| **Aroclor 1254** | **0.09** (0.07) | --- | 8082A | --- | 1 | 05/13/24 15:34 | --- | DE41008 |
| Aroclor 1260 | ND (0.07) | --- | 8082A | --- | 1 | 05/13/24 15:34 | --- | DE41008 |
| Aroclor 1262 | ND (0.07) | --- | 8082A | --- | 1 | 05/13/24 15:34 | --- | DE41008 |
| Aroclor 1268 | ND (0.07) | --- | 8082A | --- | 1 | 05/13/24 15:34 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *56 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *57 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-1 4-5
Date Sampled: 05/01/24 15:10
Percent Solids: 90

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-15
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **46.3** (3.86) | --- | 6010D | --- | 1 | KJB | 06/10/24 23:46 | 2.88 100 | DF41009 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-1 4-5
Date Sampled: 05/01/24 15:10
Percent Solids: 90
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 15:54 | --- | DE41008 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 15:54 | --- | DE41008 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 15:54 | --- | DE41008 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 15:54 | --- | DE41008 |
| **Aroclor 1248 [2C]** | **0.3** (0.05) | --- | 8082A | --- | 1 | 05/13/24 15:54 | --- | DE41008 |
| **Aroclor 1254** | **0.4** (0.05) | --- | 8082A | --- | 1 | 05/13/24 15:54 | --- | DE41008 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 15:54 | --- | DE41008 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 15:54 | --- | DE41008 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 15:54 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *63 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *58 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-2 4-5
Date Sampled: 05/01/24 14:55
Percent Solids: 93
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:13 | --- | DE41008 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:13 | --- | DE41008 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:13 | --- | DE41008 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:13 | --- | DE41008 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:13 | --- | DE41008 |
| **Aroclor 1254** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:13 | --- | DE41008 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:13 | --- | DE41008 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:13 | --- | DE41008 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:13 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *66 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-5 4-5
Date Sampled: 05/01/24 14:35
Percent Solids: 92
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:33 | --- | DE41008 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:33 | --- | DE41008 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:33 | --- | DE41008 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:33 | --- | DE41008 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:33 | --- | DE41008 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:33 | --- | DE41008 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:33 | --- | DE41008 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:33 | --- | DE41008 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:33 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *70 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-6 DUP 1-2
Date Sampled: 05/01/24 14:00
Percent Solids: 95
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0051
ESS Laboratory Sample ID: 24E0051-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:53 | --- | DE41008 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:53 | --- | DE41008 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:53 | --- | DE41008 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:53 | --- | DE41008 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:53 | --- | DE41008 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:53 | --- | DE41008 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:53 | --- | DE41008 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:53 | --- | DE41008 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 16:53 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *68 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DF41009 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 168 | 16.7 | mg/kg wet | 225.0 | | 74 | 72-128 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 197 | 16.4 | mg/kg wet | 225.0 | | 87 | 72-128 | 16 | 30 | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE40918 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0226* | | mg/kg wet | *0.02500* | | *90* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0205* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0193* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | 1 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | 0.9 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE40918 - 3540C** | | | | | | | | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 2 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | 2 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0191* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| **Batch DE41008 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0211* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0204* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0178* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0189* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 80 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0205* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0196* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0184* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0186* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | 9 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | 9 | 30 | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 93 | 40-140 | 11 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 96 | 40-140 | 13 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE41008 - 3540C** | | | | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0229* | | mg/kg wet | *0.02500* | | *92* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0222* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| **Matrix Spike Source: 24E0051-18** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg dry | 0.5209 | ND | 89 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg dry | 0.5209 | ND | 79 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg dry | 0.5209 | ND | 86 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg dry | 0.5209 | ND | 77 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0202* | | mg/kg dry | *0.02605* | | *78* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0186* | | mg/kg dry | *0.02605* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0195* | | mg/kg dry | *0.02605* | | *75* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0198* | | mg/kg dry | *0.02605* | | *76* | *30-150* | | | |
| **Matrix Spike Dup Source: 24E0051-18** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg dry | 0.5209 | ND | 92 | 40-140 | 3 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg dry | 0.5209 | ND | 84 | 40-140 | 6 | 30 | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg dry | 0.5209 | ND | 89 | 40-140 | 3 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg dry | 0.5209 | ND | 81 | 40-140 | 4 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0211* | | mg/kg dry | *0.02605* | | *81* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0192* | | mg/kg dry | *0.02605* | | *74* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0205* | | mg/kg dry | *0.02605* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0210* | | mg/kg dry | *0.02605* | | *81* | *30-150* | | | |
| **Batch DE41504 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0184* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0155* | | mg/kg wet | *0.02500* | | *62* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE41504 - 3540C** | | | | | | | | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0176* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0182* | | mg/kg wet | *0.02500* | | *73* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 99 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 92 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 100 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 97 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0226* | | mg/kg wet | *0.02500* | | *90* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0204* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0209* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0206* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 16 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 70 | 40-140 | 27 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 73 | 40-140 | 31 | 30 | D+ |
| Aroclor 1260 [2C] | 0.3 | 0.05 | mg/kg wet | 0.5000 | | 68 | 40-140 | 35 | 30 | D+ |
| *Surrogate: Decachlorobiphenyl* | *0.0174* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0145* | | mg/kg wet | *0.02500* | | *58* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0179* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0171* | | mg/kg wet | *0.02500* | | *68* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| SD | Surrogate recovery(ies) diluted below the MRL (SD). |
| D+ | Relative percent difference for duplicate is outside of criteria (D+). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0051

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0051
Date Received: 5/2/2024
Project Due Date: 5/9/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 5.4 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered — Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 543682 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 543683 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 543684 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 543685 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 543686 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 543687 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 543688 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 8 | 543689 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 9 | 543690 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 10 | 543691 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 11 | 543692 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 12 | 543693 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 13 | 543694 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 14 | 543695 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 15 | 543696 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 16 | 543697 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 17 | 543698 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 18 | 543699 | Yes | N/A | Yes | 4 oz. Jar | NP | |

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24E0051
Date Received: 5/2/2024

**2nd Review**
**Were all containers scanned into storage/lab?** Initials: dl

| | |
|---|---|
| Are barcode labels on correct containers? | Yes / No |
| Are all Flashpoint stickers attached/container ID # circled? | Yes / No / NA |
| Are all Hex Chrome stickers attached? | Yes / No / NA |
| Are all QC stickers attached? | Yes / No / NA |
| Are VOA stickers attached if bubbles noted? | Yes / No / NA |

Completed By: [signature] Date & Time: 5/2/24 1700

Reviewed By: [signature] Date & Time: 5/2/24 1715.

# CHAIN OF CUSTODY


ESS Laboratory
*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com


ESS Lab # 24E0051

Reporting Limits

Electonic Deliverables: ☑ Data Checker ☑ Other (Please Specify →) ☑ Excel EDD

Turn Time: 5 Days

Regulatory State: Massachusetts

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

Company Name: Civil and Environmental Consultants

Project #: 332-344

Project Name: MassCEC Phase III - Site 1

Contact Person: Cassia Dal Bello

Address: 31 Bellows Road

City: Raynham

State: MA

Zip Code: 02767

PO #:

Telephone Number: 774-501-2176

FAX Number:

Email Address: cdalbello; jkitchen, dbarboza@cecinc.com

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: PCB | | |

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Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 24E0051

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Is this project for any of the following?: | ○ CT RCP ◉ MA MCP ○ RGP | |

Reporting Limits

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis: PCB; MS/MSD; Total Pb - JA; MS/MSD; HOLD

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | MS/MSD | Total Pb - JA | MS/MSD | HOLD |
|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 5-1-24 CDB | 13:05 CDB | Grab | Soil | A-1 4-5 | X | | | | |
| 12 | | 13:20 | Grab | Soil | A-3 4-5 | X | | | | |
| 13 | | 13:40 | Grab | Soil | A-5 4-5 | X | | | | |
| 14 | | 14:00 | Grab | Soil | A-6 4-5 | X | | | | |
| 15 | | 15:10 | Grab | Soil | B-1 4-5 | X | | X - 6/10/2024 | | |
| 16 | | 14:55 | Grab | Soil | B-2 4-5 | X | | | | |
| 17 | | 14:35 | Grab | Soil | B-5 4-5 | X | | | | |
| 18 | | 14:00 | Grab | Soil | A-6 DUP 1-2 | X | | X | | |
| — | | 14:00 | Grab | Soil | A-6 DUP 4-5 | | | X | X | |
| | | | Grab | Soil | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 |
| | | | | | | | | | | **Number of Containers per Sample:** | | |

**Laboratory Use Only**

Cooler Present: yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 5.4 °C ice

**Sampled by :** DB and KD

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-1-24 1015 | 5/2/24 10:15 | 5/2/24 10:15 | 5/2/24 1605 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E0124**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 4:34 pm, May 17, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

## SAMPLE RECEIPT

The following samples were received on May 03, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Low Level VOA vials were frozen by ESS Laboratory on 5/03/24 at 18:43.**
**Tetrahydrofuran is reported above the MA CAM reporting limit of 0.010 mg/kg.**

**Question I: All samples for EPH and Metals were analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E0124-01 | C-1 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-02 | C-3 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-03 | C-5 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-04 | C-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-05 | D-8.5 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

| | | | |
|---|---|---|---|
| 24E0124-06 | E-7 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-07 | E-5 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-08 | E-1 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-09 | G-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-10 | G-5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-11 | G-1 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-12 | H-8.5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-13 | I-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-14 | I-5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-15 | I-1 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-16 | E-3 0-3 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-17 | E-3 3-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-18 | II-8.5 5-6 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

## PROJECT NARRATIVE

**8081B Organochlorine Pesticides**

| | |
|---|---|
| 24E0124-15 | **Lower value is used due to matrix interferences (LC).** |
| | 4,4´-DDT |
| 24E0124-15 | **Percent difference between primary and confirmation results exceeds 40% (P).** |
| | 4,4´-DDT |

**8082A Polychlorinated Biphenyls (PCB)**

| | |
|---|---|
| 24E0124-11 | **Percent difference between primary and confirmation results exceeds 40% (P).** |
| | Aroclor 1260 |
| DE41504-BSD1 | **Relative percent difference for duplicate is outside of criteria (D+).** |
| | Aroclor 1260 (31% @ 30%), Aroclor 1260 [2C] (35% @ 30%) |

**Semi-Volatile Organic Compounds**

| | |
|---|---|
| 24E0124-18 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| D4E0117-CCV1 | **Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration** |
| | 2,4-Dimethylphenol (111% @ 80-120%) |
| D4E0117-CCV1 | **Calibration required quadratic regression (Q).** |
| | 2,4-Dinitrophenol (79% @ 40-160%), Di-n-octylphthalate (118% @ 80-120%) |
| D4E0117-CCV1 | **Continuing Calibration %Diff/Drift is above control limit (CD+).** |
| | Butylbenzylphthalate (22% @ 20%), Dibenzo(a,h)Anthracene (21% @ 20%), p-Terphenyl-d14 (28% @ 20%), Pyrene (23% @ 20%) |
| D4E0117-CCV1 | **Initial Calibration Verification recovery is above upper control limit (ICV+).** |
| | 2,4-Dimethylphenol |
| D4E0143-CCV1 | **Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration** |
| | 2,4-Dimethylphenol (95% @ 80-120%) |
| D4E0143-CCV1 | **Calibration required quadratic regression (Q).** |
| | 2,4-Dinitrophenol (100% @ 40-160%), Pentachlorophenol (102% @ 40-160%) |
| D4E0143-CCV1 | **Continuing Calibration %Diff/Drift is above control limit (CD+).** |
| | 2,4,6-Tribromophenol (21% @ 20%), Hexachlorobutadiene (22% @ 20%) |
| D4E0161-CCV1 | **Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration** |
| | 2,4-Dimethylphenol (96% @ 80-120%) |
| D4E0161-CCV1 | **Calibration required quadratic regression (Q).** |
| | 2,4-Dinitrophenol (71% @ 40-160%), Pentachlorophenol (101% @ 40-160%) |
| D4E0161-CCV1 | **Continuing Calibration %Diff/Drift is above control limit (CD+).** |
| | Hexachlorobutadiene (22% @ 20%) |
| DE40356-BLK1 | **Surrogate recovery(ies) above upper control limit (S+).** |
| | p-Terphenyl-d14 (149% @ 30-130%) |
| DE40356-BS1 | **Blank Spike recovery is above upper control limit (B+).** |
| | 2,4-Dimethylphenol (155% @ 30-130%) |
| DE40356-BS1 | **Surrogate recovery(ies) above upper control limit (S+).** |
| | 2,4,6-Tribromophenol (141% @ 30-130%), p-Terphenyl-d14 (144% @ 30-130%) |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

DE40356-BSD1 **Blank Spike recovery is above upper control limit (B+).**
2,4-Dimethylphenol (160% @ 30-130%)

DE40356-BSD1 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (140% @ 30-130%), p-Terphenyl-d14 (153% @ 30-130%)

DE40705-BSD1 **Blank Spike recovery is above upper control limit (B+).**
2,4-Dimethylphenol (131% @ 30-130%)

**Total Metals**

24E0124-04 **RSD of replicate analysis > 20%. Reanalysis produced similar results.**
Arsenic

**Volatile Organics Low Level**

D4E0122-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
Tetrachloroethene (23% @ 20%)

DE40817-BS1 **Blank Spike recovery is above upper control limit (B+).**
Acetone (162% @ 40-160%)

DE40817-BSD1 **Blank Spike recovery is above upper control limit (B+).**
Acetone (174% @ 40-160%)

DE40926-BS1 **Blank Spike recovery is above upper control limit (B+).**
Acetone (174% @ 40-160%)

DE40926-BSD1 **Blank Spike recovery is above upper control limit (B+).**
Acetone (165% @ 40-160%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E0124-01 through 24E0124-18**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| (x) 8260 VOC CAM II A | (x) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| (x) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | (x) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | (x) MassDEP EPH CAM IV B | (x) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes (x) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes ( ) No (x)* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (x)* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: May 17, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **3.84** (0.82) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:20 | 2.7 | 100 | DE40606 |
| **Barium** | **15.4** (0.82) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:20 | 2.7 | 100 | DE40606 |
| Cadmium | ND (0.41) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:20 | 2.7 | 100 | DE40606 |
| **Chromium** | **13.2** (0.82) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:20 | 2.7 | 100 | DE40606 |
| **Lead** | **53.3** (4.08) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:20 | 2.7 | 100 | DE40606 |
| Mercury | ND (0.035) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:31 | 0.62 | 40 | DE40624 |
| Selenium | ND (4.08) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:20 | 2.7 | 100 | DE40606 |
| Silver | ND (0.41) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:20 | 2.7 | 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 5.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,1,1-Trichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,1,2,2-Tetrachloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,1,2-Trichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,1-Dichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,1-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,1-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,2,3-Trichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,2,3-Trichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,2,4-Trichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,2,4-Trimethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,2-Dibromoethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,2-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,2-Dichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,2-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,3,5-Trimethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,3-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,3-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,4-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,4-Dioxane | ND (0.108) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 2,2-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 2-Butanone | ND (0.0540) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 2-Chlorotoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 2-Hexanone | ND (0.0540) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 4-Chlorotoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 4-Isopropyltoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 5.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0540) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Acetone | ND (0.0540) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Benzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Bromobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Bromochloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Bromodichloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Bromoform | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Bromomethane | ND (0.0108) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Carbon Disulfide | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Carbon Tetrachloride | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Chlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Chloroethane | ND (0.0108) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Chloroform | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Chloromethane | ND (0.0108) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| cis-1,2-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| cis-1,3-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Dibromochloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Dibromomethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Dichlorodifluoromethane | ND (0.0108) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Diethyl Ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Di-isopropyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Ethyl tertiary-butyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Ethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Hexachlorobutadiene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Isopropylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Methyl tert-Butyl Ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Methylene Chloride | ND (0.0270) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 5.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| n-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| n-Propylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| sec-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Styrene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| tert-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Tertiary-amyl methyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Tetrachloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Tetrahydrofuran | ND (0.0216) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Toluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| trans-1,2-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| trans-1,3-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Trichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Trichlorofluoromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Vinyl Chloride | ND (0.0108) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Xylene O | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Xylene P,M | ND (0.0108) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Xylenes (Total) | ND (0.0108) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *110 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *99 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *104 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.553) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Acetophenone | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Aniline | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Anthracene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Benzo(a)anthracene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Benzo(a)pyrene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Benzo(b)fluoranthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Benzo(g,h,i)perylene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Benzo(k)fluoranthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| **bis(2-Ethylhexyl)phthalate** | **0.401** (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Butylbenzylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Chrysene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.553) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Fluoranthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Fluorene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Indeno(1,2,3-cd)Pyrene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Isophorone | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Naphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Phenanthrene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Phenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Pyrene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Pyridine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *81 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *86 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *84 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *92 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *84 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *89 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *84 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *105 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:50 | --- | DE41008 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:50 | --- | DE41008 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:50 | --- | DE41008 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:50 | --- | DE41008 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:50 | --- | DE41008 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:50 | --- | DE41008 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:50 | --- | DE41008 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:50 | --- | DE41008 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:50 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 20.7g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0213) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Toxaphene | ND (0.133) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *93 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |
| 2,4-D | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |
| Dalapon | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |
| Dinoseb | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |
| MCPA | ND (2.54) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |
| MCPP | ND (2.56) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/3/24 19:32

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (11.0) | --- | 8100M | --- | 1 | 05/06/24 17:20 | --- | DE40243 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *75 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 123** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **8.02** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.7** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:02 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.05** (0.72) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:22 | 2.98 | 100 | DE40606 |
| **Barium** | **14.1** (0.72) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:22 | 2.98 | 100 | DE40606 |
| Cadmium | ND (0.36) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:22 | 2.98 | 100 | DE40606 |
| **Chromium** | **6.84** (0.72) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:22 | 2.98 | 100 | DE40606 |
| **Lead** | **24.6** (3.60) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:22 | 2.98 | 100 | DE40606 |
| Mercury | ND (0.035) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:33 | 0.6 | 40 | DE40624 |
| Selenium | ND (3.60) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:22 | 2.98 | 100 | DE40606 |
| Silver | ND (0.36) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:22 | 2.98 | 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,1,1-Trichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,1,2,2-Tetrachloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,1,2-Trichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,1-Dichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,1-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,1-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,2,3-Trichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,2,3-Trichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,2,4-Trichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,2,4-Trimethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,2-Dibromoethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,2-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,2-Dichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,2-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,3,5-Trimethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,3-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,3-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,4-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,4-Dioxane | ND (0.107) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 2,2-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 2-Butanone | ND (0.0537) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 2-Chlorotoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 2-Hexanone | ND (0.0537) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 4-Chlorotoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 4-Isopropyltoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0537) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Acetone | ND (0.0537) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Benzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Bromobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Bromochloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Bromodichloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Bromoform | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Bromomethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Carbon Disulfide | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Carbon Tetrachloride | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Chlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Chloroethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Chloroform | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Chloromethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| cis-1,2-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| cis-1,3-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Dibromochloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Dibromomethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Dichlorodifluoromethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Diethyl Ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Di-isopropyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Ethyl tertiary-butyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Ethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Hexachlorobutadiene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Isopropylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Methyl tert-Butyl Ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Methylene Chloride | ND (0.0269) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| n-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| n-Propylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| sec-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Styrene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| tert-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Tertiary-amyl methyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Tetrachloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Tetrahydrofuran | ND (0.0215) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Toluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| trans-1,2-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| trans-1,3-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Trichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Trichlorofluoromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Vinyl Chloride | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Xylene O | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Xylene P,M | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Xylenes (Total) | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *112 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *97 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *106 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.05) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.524) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.05) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Acetophenone | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Aniline | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Anthracene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Benzo(a)anthracene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Benzo(a)pyrene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Benzo(b)fluoranthene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Benzo(g,h,i)perylene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Benzo(k)fluoranthene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| bis(2-Ethylhexyl)phthalate | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Butylbenzylphthalate | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Chrysene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.524) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Fluoranthene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Fluorene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Indeno(1,2,3-cd)Pyrene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Isophorone | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Naphthalene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.05) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Phenanthrene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Phenol | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Pyrene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Pyridine | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *86 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *84 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *88 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *96 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *89 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *93 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *88 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *113 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/15/24 11:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/17/24 0:06 | --- | DE41504 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/17/24 0:06 | --- | DE41504 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/17/24 0:06 | --- | DE41504 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/17/24 0:06 | --- | DE41504 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/17/24 0:06 | --- | DE41504 |
| **Aroclor 1254 [2C]** | **0.08** (0.05) | --- | 8082A | --- | 1 | 05/17/24 0:06 | --- | DE41504 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/17/24 0:06 | --- | DE41504 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/17/24 0:06 | --- | DE41504 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/17/24 0:06 | --- | DE41504 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 19.8g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0217) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Toxaphene | ND (0.136) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *103 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *84 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |
| MCPA | ND (2.42) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |
| MCPP | ND (2.45) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 12:15

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (10.8) | --- | 8100M | --- | 1 | 05/06/24 23:12 | --- | DE40623 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *72 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 59** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **7.75** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.7** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:02 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.96** (0.79) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:24 | 2.7 | 100 | DE40606 |
| **Barium** | **15.0** (0.79) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:24 | 2.7 | 100 | DE40606 |
| Cadmium | ND (0.39) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:24 | 2.7 | 100 | DE40606 |
| **Chromium** | **5.88** (0.79) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:24 | 2.7 | 100 | DE40606 |
| **Lead** | **169** (3.93) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:24 | 2.7 | 100 | DE40606 |
| **Mercury** | **0.035** (0.034) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:36 | 0.61 | 40 | DE40624 |
| Selenium | ND (3.93) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:24 | 2.7 | 100 | DE40606 |
| Silver | ND (0.39) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:24 | 2.7 | 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.58** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/10/24 14:49 | 50 50 | DE40923 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 5.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,1,1-Trichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,1,2,2-Tetrachloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,1,2-Trichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,1-Dichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,1-Dichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,1-Dichloropropene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,2,3-Trichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,2,3-Trichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,2,4-Trichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,2,4-Trimethylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,2-Dibromoethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,2-Dichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,2-Dichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,2-Dichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,3,5-Trimethylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,3-Dichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,3-Dichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,4-Dichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,4-Dioxane | ND (0.0982) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 2,2-Dichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 2-Butanone | ND (0.0491) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 2-Chlorotoluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 2-Hexanone | ND (0.0491) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 4-Chlorotoluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 4-Isopropyltoluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 5.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0491) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Acetone | ND (0.0491) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Benzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Bromobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Bromochloromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Bromodichloromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Bromoform | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Bromomethane | ND (0.0098) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Carbon Disulfide | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Carbon Tetrachloride | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Chlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Chloroethane | ND (0.0098) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Chloroform | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Chloromethane | ND (0.0098) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| cis-1,2-Dichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| cis-1,3-Dichloropropene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Dibromochloromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Dibromomethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Dichlorodifluoromethane | ND (0.0098) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Diethyl Ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Di-isopropyl ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Ethyl tertiary-butyl ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Ethylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Hexachlorobutadiene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Isopropylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Methyl tert-Butyl Ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Methylene Chloride | ND (0.0246) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 5.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| n-Butylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| n-Propylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| sec-Butylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Styrene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| tert-Butylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Tertiary-amyl methyl ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Tetrachloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Tetrahydrofuran | ND (0.0196) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Toluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| trans-1,2-Dichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| trans-1,3-Dichloropropene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Trichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Trichlorofluoromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Vinyl Chloride | ND (0.0098) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Xylene O | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Xylene P,M | ND (0.0098) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Xylenes (Total) | ND (0.0098) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *112 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *96 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *105 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.04) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.520) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.04) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Acetophenone | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Aniline | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Anthracene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Benzo(a)anthracene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Benzo(a)pyrene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Benzo(b)fluoranthene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Benzo(g,h,i)perylene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Benzo(k)fluoranthene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| bis(2-Ethylhexyl)phthalate | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Butylbenzylphthalate | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Chrysene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.520) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Fluoranthene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Fluorene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Indeno(1,2,3-cd)Pyrene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Isophorone | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Naphthalene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.04) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Phenanthrene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Phenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Pyrene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Pyridine | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *88 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *85 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *93 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *99 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *92 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *97 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *96 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *121 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:30 | --- | DE41008 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:30 | --- | DE41008 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:30 | --- | DE41008 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:30 | --- | DE41008 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:30 | --- | DE41008 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:30 | --- | DE41008 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:30 | --- | DE41008 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:30 | --- | DE41008 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:30 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 19.7g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0215) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Toxaphene | ND (0.135) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *101 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |
| MCPA | ND (2.42) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |
| MCPP | ND (2.44) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *85 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 12:15

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **19.1** (10.9) | --- | 8100M | --- | 1 | 05/06/24 23:50 | --- | DE40623 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *66 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 186** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **7.68** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.6** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:02 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/8/24 17:42

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **20.1** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | 100 2000 | DE40856 |
| **Temperature (Max C)** | **21.4** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | 100 2000 | DE40856 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **X* 1.71** (0.81) | --- | 6010D | --- | 1 | KJB | 05/09/24 17:49 | 2.66 | 100 | DE40606 |
| **Barium** | **9.04** (0.81) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:26 | 2.66 | 100 | DE40606 |
| Cadmium | ND (0.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:26 | 2.66 | 100 | DE40606 |
| **Chromium** | **4.11** (0.81) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:26 | 2.66 | 100 | DE40606 |
| **Lead** | **10.9** (4.03) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:26 | 2.66 | 100 | DE40606 |
| Mercury | ND (0.035) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:38 | 0.6 | 40 | DE40624 |
| Selenium | ND (4.03) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:26 | 2.66 | 100 | DE40606 |
| Silver | ND (0.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:26 | 2.66 | 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 4.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,1,1-Trichloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,1,2,2-Tetrachloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,1,2-Trichloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,1-Dichloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,1-Dichloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,1-Dichloropropene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,2,3-Trichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,2,3-Trichloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,2,4-Trichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,2,4-Trimethylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,2-Dibromoethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,2-Dichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,2-Dichloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,2-Dichloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,3,5-Trimethylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,3-Dichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,3-Dichloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,4-Dichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,4-Dioxane | ND (0.131) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 2,2-Dichloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 2-Butanone | ND (0.0653) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 2-Chlorotoluene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 2-Hexanone | ND (0.0653) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 4-Chlorotoluene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 4-Isopropyltoluene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 4.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0653) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Acetone | ND (0.0653) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Benzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Bromobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Bromochloromethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Bromodichloromethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Bromoform | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Bromomethane | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Carbon Disulfide | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Carbon Tetrachloride | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Chlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Chloroethane | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Chloroform | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Chloromethane | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| cis-1,2-Dichloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| cis-1,3-Dichloropropene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Dibromochloromethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Dibromomethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Dichlorodifluoromethane | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Diethyl Ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Di-isopropyl ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Ethyl tertiary-butyl ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Ethylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Hexachlorobutadiene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Isopropylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Methyl tert-Butyl Ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Methylene Chloride | ND (0.0327) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 4.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| n-Butylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| n-Propylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| sec-Butylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Styrene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| tert-Butylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Tertiary-amyl methyl ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Tetrachloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Tetrahydrofuran | ND (0.0261) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Toluene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| trans-1,2-Dichloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| trans-1,3-Dichloropropene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Trichloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Trichlorofluoromethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Vinyl Chloride | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Xylene O | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Xylene P,M | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Xylenes (Total) | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *114 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *96 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *108 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.528) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Acetophenone | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Aniline | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Anthracene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Benzo(a)anthracene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Benzo(a)pyrene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Benzo(b)fluoranthene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Benzo(g,h,i)perylene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Benzo(k)fluoranthene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| bis(2-Ethylhexyl)phthalate | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Butylbenzylphthalate | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Chrysene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.528) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Fluoranthene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Fluorene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Indeno(1,2,3-cd)Pyrene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Isophorone | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Naphthalene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Phenanthrene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Phenol | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| **Pyrene** | **0.319** (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Pyridine | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *87 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *89 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *88 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *93 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *88 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *93 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *87 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *116 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:50 | --- | DE41008 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:50 | --- | DE41008 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:50 | --- | DE41008 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:50 | --- | DE41008 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:50 | --- | DE41008 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:50 | --- | DE41008 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:50 | --- | DE41008 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:50 | --- | DE41008 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:50 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *65 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *54 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 20.9g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4′-DDD | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| 4,4′-DDE | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| 4,4′-DDT | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Aldrin | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0205) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Endrin | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0015) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Toxaphene | ND (0.128) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *92 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |
| MCPA | ND (2.42) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |
| MCPP | ND (2.44) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 12:15

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (10.8) | --- | 8100M | --- | 1 | 05/07/24 0:29 | --- | DE40623 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *68 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 36** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **7.46** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.8** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:08 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.11** (0.79) | --- | 6010D | --- | 1 | KJB | 05/09/24 17:51 | 2.8 | 100 | DE40606 |
| **Barium** | **152** (0.79) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:28 | 2.8 | 100 | DE40606 |
| Cadmium | ND (0.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:28 | 2.8 | 100 | DE40606 |
| **Chromium** | **11.6** (0.79) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:28 | 2.8 | 100 | DE40606 |
| **Lead** | **4060** (39.7) | --- | 6010D | --- | 10 | KJB | 05/08/24 19:38 | 2.8 | 100 | DE40606 |
| **Mercury** | **0.091** (0.035) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:40 | 0.63 | 40 | DE40624 |
| Selenium | ND (3.97) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:28 | 2.8 | 100 | DE40606 |
| Silver | ND (0.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:28 | 2.8 | 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.54** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/14/24 14:13 | 50 50 | DE41423 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 4.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,1,1-Trichloroethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,1,2,2-Tetrachloroethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,1,2-Trichloroethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,1-Dichloroethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,1-Dichloroethene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,1-Dichloropropene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,2,3-Trichlorobenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,2,3-Trichloropropane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,2,4-Trichlorobenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,2,4-Trimethylbenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,2-Dibromoethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,2-Dichlorobenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,2-Dichloroethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,2-Dichloropropane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,3,5-Trimethylbenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,3-Dichlorobenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,3-Dichloropropane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,4-Dichlorobenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,4-Dioxane | ND (0.126) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 2,2-Dichloropropane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 2-Butanone | ND (0.0631) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 2-Chlorotoluene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 2-Hexanone | ND (0.0631) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 4-Chlorotoluene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 4-Isopropyltoluene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 4.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0631) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Acetone | ND (0.0631) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Benzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Bromobenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Bromochloromethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Bromodichloromethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Bromoform | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Bromomethane | ND (0.0126) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Carbon Disulfide | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Carbon Tetrachloride | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Chlorobenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Chloroethane | ND (0.0126) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Chloroform | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Chloromethane | ND (0.0126) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| cis-1,2-Dichloroethene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| cis-1,3-Dichloropropene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Dibromochloromethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Dibromomethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Dichlorodifluoromethane | ND (0.0126) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Diethyl Ether | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Di-isopropyl ether | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Ethyl tertiary-butyl ether | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Ethylbenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Hexachlorobutadiene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Isopropylbenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Methyl tert-Butyl Ether | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Methylene Chloride | ND (0.0316) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 4.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| n-Butylbenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| n-Propylbenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| sec-Butylbenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Styrene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| tert-Butylbenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Tertiary-amyl methyl ether | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Tetrachloroethene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Tetrahydrofuran | ND (0.0253) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Toluene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| trans-1,2-Dichloroethene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| trans-1,3-Dichloropropene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Trichloroethene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Trichlorofluoromethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Vinyl Chloride | ND (0.0126) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Xylene O | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Xylene P,M | ND (0.0126) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Xylenes (Total) | ND (0.0126) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *114 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *97 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *109 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.542) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Acetophenone | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Aniline | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Benzo(a)anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Benzo(a)pyrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Benzo(b)fluoranthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Benzo(g,h,i)perylene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Benzo(k)fluoranthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| bis(2-Ethylhexyl)phthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Butylbenzylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Chrysene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.542) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Fluoranthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Fluorene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Indeno(1,2,3-cd)Pyrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Isophorone | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Naphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Phenanthrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Phenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Pyrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Pyridine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *93 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *93 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *95 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *102 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *95 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *98 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *94 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *114 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:09 | --- | DE41008 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:09 | --- | DE41008 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:09 | --- | DE41008 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:09 | --- | DE41008 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:09 | --- | DE41008 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:09 | --- | DE41008 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:09 | --- | DE41008 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:09 | --- | DE41008 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:09 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *76 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *68 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 20.4g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| 4,4´-DDE [2C] | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0218) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Toxaphene | ND (0.136) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *92 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |
| 2,4-D | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |
| Dalapon | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |
| Dinoseb | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |
| MCPA [2C] | ND (2.51) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |
| MCPP | ND (2.54) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 12:15

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (11.6) | --- | 8100M | --- | 1 | 05/07/24 1:07 | --- | DE40623 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *64 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 35** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **7.11** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.9** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:08 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/13/24 17:41

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **19.7** (N/A) | --- | 1311 | --- | 1 | RAP | 05/14/24 9:43 | 100 2000 | DE41362 |
| **Temperature (Max C)** | **21.6** (N/A) | --- | 1311 | --- | 1 | RAP | 05/14/24 9:43 | 100 2000 | DE41362 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **6.38** (0.88) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:35 | 2.77 | 100 | DE40606 |
| **Barium** | **58.0** (0.88) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:35 | 2.77 | 100 | DE40606 |
| Cadmium | ND (0.44) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:35 | 2.77 | 100 | DE40606 |
| **Chromium** | **11.8** (0.88) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:35 | 2.77 | 100 | DE40606 |
| **Lead** | **171** (4.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:35 | 2.77 | 100 | DE40606 |
| **Mercury** | **0.332** (0.038) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:42 | 0.64 | 40 | DE40624 |
| Selenium | ND (4.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:35 | 2.77 | 100 | DE40606 |
| Silver | ND (0.44) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:35 | 2.77 | 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.40** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/10/24 14:53 | 50 50 | DE40923 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 4.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,1,1-Trichloroethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,1,2,2-Tetrachloroethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,1,2-Trichloroethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,1-Dichloroethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,1-Dichloroethene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,1-Dichloropropene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,2,3-Trichlorobenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,2,3-Trichloropropane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,2,4-Trichlorobenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,2,4-Trimethylbenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,2-Dibromoethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,2-Dichlorobenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,2-Dichloroethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,2-Dichloropropane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,3,5-Trimethylbenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,3-Dichlorobenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,3-Dichloropropane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,4-Dichlorobenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,4-Dioxane | ND (0.135) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 2,2-Dichloropropane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 2-Butanone | ND (0.0677) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 2-Chlorotoluene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 2-Hexanone | ND (0.0677) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 4-Chlorotoluene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 4-Isopropyltoluene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 4.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0677) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Acetone | ND (0.0677) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Benzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Bromobenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Bromochloromethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Bromodichloromethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Bromoform | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Bromomethane | ND (0.0135) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Carbon Disulfide | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Carbon Tetrachloride | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Chlorobenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Chloroethane | ND (0.0135) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Chloroform | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Chloromethane | ND (0.0135) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| cis-1,2-Dichloroethene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| cis-1,3-Dichloropropene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Dibromochloromethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Dibromomethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Dichlorodifluoromethane | ND (0.0135) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Diethyl Ether | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Di-isopropyl ether | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Ethyl tertiary-butyl ether | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Ethylbenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Hexachlorobutadiene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Isopropylbenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Methyl tert-Butyl Ether | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Methylene Chloride | ND (0.0339) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 4.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| n-Butylbenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| n-Propylbenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| sec-Butylbenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Styrene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| tert-Butylbenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Tertiary-amyl methyl ether | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Tetrachloroethene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Tetrahydrofuran | ND (0.0271) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Toluene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| trans-1,2-Dichloroethene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| trans-1,3-Dichloropropene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Trichloroethene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Trichlorofluoromethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Vinyl Chloride | ND (0.0135) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Xylene O | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Xylene P,M | ND (0.0135) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Xylenes (Total) | ND (0.0135) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *115 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *99 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *109 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.030) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.19) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.595) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.19) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Acetophenone | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Aniline | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Anthracene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Benzo(a)anthracene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Benzo(a)pyrene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Benzo(b)fluoranthene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Benzo(g,h,i)perylene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Benzo(k)fluoranthene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| bis(2-Ethylhexyl)phthalate | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Butylbenzylphthalate | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Chrysene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.595) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Fluoranthene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Fluorene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Indeno(1,2,3-cd)Pyrene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Isophorone | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Naphthalene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.19) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Phenanthrene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Phenol | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Pyrene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Pyridine | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *95 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *91 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *96 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *102 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *97 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *101 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *95 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *121 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 22:29 | --- | DE41008 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 22:29 | --- | DE41008 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 22:29 | --- | DE41008 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 22:29 | --- | DE41008 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 22:29 | --- | DE41008 |
| Aroclor 1254 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 22:29 | --- | DE41008 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 22:29 | --- | DE41008 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 22:29 | --- | DE41008 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 22:29 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 20.9g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4′-DDD | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| 4,4′-DDE | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| 4,4′-DDT | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Aldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0233) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Endrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0018) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Toxaphene | ND (0.146) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *95 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *84 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |
| 2,4-D | ND (0.056) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.057) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |
| Dalapon | ND (0.054) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |
| Dicamba | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.056) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |
| Dinoseb | ND (0.057) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |
| MCPA | ND (2.78) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |
| MCPP | ND (2.81) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *85 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 12:15

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **19.6** (12.4) | --- | 8100M | --- | 1 | 05/07/24 1:46 | --- | DE40623 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *69 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 129** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **7.76** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.8** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:08 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/8/24 17:42

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **20.1** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | 100 2000 | DE40856 |
| **Temperature (Max C)** | **21.4** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | 100 2000 | DE40856 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **8.09** (0.77) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:37 | 2.83 | 100 | DE40606 |
| **Barium** | **104** (0.77) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:37 | 2.83 | 100 | DE40606 |
| Cadmium | ND (0.38) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:37 | 2.83 | 100 | DE40606 |
| **Chromium** | **12.5** (0.77) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:37 | 2.83 | 100 | DE40606 |
| **Lead** | **368** (3.84) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:37 | 2.83 | 100 | DE40606 |
| **Mercury** | **0.988** (0.173) | --- | 7471B | --- | 5 | AFV | 05/06/24 18:43 | 0.62 | 40 | DE40624 |
| Selenium | ND (3.84) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:37 | 2.83 | 100 | DE40606 |
| Silver | ND (0.38) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:37 | 2.83 | 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **1.38** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/10/24 14:58 | 50 50 | DE40923 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 4.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,1,1-Trichloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,1,2,2-Tetrachloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,1,2-Trichloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,1-Dichloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,1-Dichloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,1-Dichloropropene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,2,3-Trichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,2,3-Trichloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,2,4-Trichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,2,4-Trimethylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,2-Dibromoethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,2-Dichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,2-Dichloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,2-Dichloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,3,5-Trimethylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,3-Dichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,3-Dichloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,4-Dichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,4-Dioxane | ND (0.121) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 2,2-Dichloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 2-Butanone | ND (0.0604) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 2-Chlorotoluene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 2-Hexanone | ND (0.0604) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 4-Chlorotoluene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 4-Isopropyltoluene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 4.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0604) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Acetone | ND (0.0604) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Benzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Bromobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Bromochloromethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Bromodichloromethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Bromoform | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Bromomethane | ND (0.0121) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Carbon Disulfide | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Carbon Tetrachloride | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Chlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Chloroethane | ND (0.0121) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Chloroform | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Chloromethane | ND (0.0121) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| cis-1,2-Dichloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| cis-1,3-Dichloropropene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Dibromochloromethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Dibromomethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Dichlorodifluoromethane | ND (0.0121) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Diethyl Ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Di-isopropyl ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Ethyl tertiary-butyl ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Ethylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Hexachlorobutadiene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Isopropylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Methyl tert-Butyl Ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Methylene Chloride | ND (0.0302) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 4.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| n-Butylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| n-Propylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| sec-Butylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Styrene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| tert-Butylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Tertiary-amyl methyl ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Tetrachloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Tetrahydrofuran | ND (0.0241) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Toluene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| trans-1,2-Dichloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| trans-1,3-Dichloropropene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Trichloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Trichlorofluoromethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Vinyl Chloride | ND (0.0121) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Xylene O | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Xylene P,M | ND (0.0121) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Xylenes (Total) | ND (0.0121) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *111 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *94 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *107 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.13) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.566) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.13) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Acetophenone | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Aniline | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Anthracene** | **0.435** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Benzo(a)anthracene** | **1.29** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Benzo(a)pyrene** | **1.21** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Benzo(b)fluoranthene** | **0.919** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Benzo(g,h,i)perylene** | **0.750** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Benzo(k)fluoranthene** | **0.895** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| bis(2-Ethylhexyl)phthalate | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Butylbenzylphthalate | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Chrysene** | **1.20** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.566) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Fluoranthene** | **2.28** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Fluorene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Indeno(1,2,3-cd)Pyrene** | **0.803** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Isophorone | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Naphthalene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.13) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Phenanthrene** | **1.78** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Phenol | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Pyrene** | **2.54** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Pyridine | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *91 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *93 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *94 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *101 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *92 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *97 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *93 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *122 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:49 | --- | DE41008 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:49 | --- | DE41008 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:49 | --- | DE41008 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:49 | --- | DE41008 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:49 | --- | DE41008 |
| **Aroclor 1254 [2C]** | **0.09** (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:49 | --- | DE41008 |
| Aroclor 1260 [2C] | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:49 | --- | DE41008 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:49 | --- | DE41008 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:49 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *58 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *46 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Aldrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0222) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Endrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Toxaphene | ND (0.139) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *86 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *69 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |
| 2,4-D | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |
| Dalapon | ND (0.048) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |
| MCPA | ND (2.45) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |
| MCPP | ND (2.48) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *85 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 12:15

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **70.3** (10.9) | --- | 8100M | --- | 1 | 05/07/24 2:24 | --- | DE40623 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *60 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 213** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **8.57** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.5** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:14 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/8/24 17:42

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **20.1** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | 100 2000 | DE40856 |
| **Temperature (Max C)** | **21.4** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | 100 2000 | DE40856 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **6.72** (0.78) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:39 | 2.81 | 100 | DE40606 |
| **Barium** | **216** (0.78) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:39 | 2.81 | 100 | DE40606 |
| Cadmium | ND (0.39) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:39 | 2.81 | 100 | DE40606 |
| **Chromium** | **26.7** (0.78) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:39 | 2.81 | 100 | DE40606 |
| **Lead** | **676** (3.92) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:39 | 2.81 | 100 | DE40606 |
| **Mercury** | **0.237** (0.036) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:50 | 0.6 | 40 | DE40624 |
| Selenium | ND (3.92) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:39 | 2.81 | 100 | DE40606 |
| **Silver** | **0.53** (0.39) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:39 | 2.81 | 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **2.63** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/10/24 15:00 | 50 50 | DE40923 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 5.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,1,1-Trichloroethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,1,2,2-Tetrachloroethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,1,2-Trichloroethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,1-Dichloroethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,1-Dichloroethene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,1-Dichloropropene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,2,3-Trichlorobenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,2,3-Trichloropropane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,2,4-Trichlorobenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,2,4-Trimethylbenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,2-Dibromoethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,2-Dichlorobenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,2-Dichloroethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,2-Dichloropropane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,3,5-Trimethylbenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,3-Dichlorobenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,3-Dichloropropane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,4-Dichlorobenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,4-Dioxane | ND (0.106) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 2,2-Dichloropropane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 2-Butanone | ND (0.0529) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 2-Chlorotoluene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 2-Hexanone | ND (0.0529) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 4-Chlorotoluene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 4-Isopropyltoluene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 5.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0529) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Acetone | ND (0.0529) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Benzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Bromobenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Bromochloromethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Bromodichloromethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Bromoform | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Bromomethane | ND (0.0106) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Carbon Disulfide | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Carbon Tetrachloride | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Chlorobenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Chloroethane | ND (0.0106) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Chloroform | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Chloromethane | ND (0.0106) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| cis-1,2-Dichloroethene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| cis-1,3-Dichloropropene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Dibromochloromethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Dibromomethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Dichlorodifluoromethane | ND (0.0106) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Diethyl Ether | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Di-isopropyl ether | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Ethyl tertiary-butyl ether | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Ethylbenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Hexachlorobutadiene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Isopropylbenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Methyl tert-Butyl Ether | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Methylene Chloride | ND (0.0265) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 5.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| n-Butylbenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| n-Propylbenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| sec-Butylbenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Styrene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| tert-Butylbenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Tertiary-amyl methyl ether | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Tetrachloroethene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Tetrahydrofuran | ND (0.0212) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Toluene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| trans-1,2-Dichloroethene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| trans-1,3-Dichloropropene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Trichloroethene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Trichlorofluoromethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Vinyl Chloride | ND (0.0106) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Xylene O | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Xylene P,M | ND (0.0106) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Xylenes (Total) | ND (0.0106) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *113 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *96 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *108 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.029) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.15) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.574) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.15) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Acetophenone | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Aniline | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Anthracene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Benzo(a)anthracene** | **1.00** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Benzo(a)pyrene** | **1.17** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Benzo(b)fluoranthene** | **0.933** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Benzo(g,h,i)perylene** | **0.839** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Benzo(k)fluoranthene** | **0.853** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| bis(2-Ethylhexyl)phthalate | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Butylbenzylphthalate** | **0.391** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Chrysene** | **0.930** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.574) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Fluoranthene** | **1.48** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Fluorene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Indeno(1,2,3-cd)Pyrene** | **0.915** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Isophorone | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Naphthalene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.15) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Phenanthrene** | **0.559** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Phenol | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Pyrene** | **1.48** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Pyridine | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *86 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *97 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *89 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *100 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *90 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *96 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *88 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *109 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:09 | --- | DE41008 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:09 | --- | DE41008 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:09 | --- | DE41008 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:09 | --- | DE41008 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:09 | --- | DE41008 |
| **Aroclor 1254 [2C]** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:09 | --- | DE41008 |
| Aroclor 1260 [2C] | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:09 | --- | DE41008 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:09 | --- | DE41008 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:09 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *70 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *66 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 20.6g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| 4,4´-DDE [2C] | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| beta-BHC [2C] | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0214) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Toxaphene | ND (0.134) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *94 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 10g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |
| 2,4-D | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |
| Dalapon | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |
| Dinoseb | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |
| MCPA | ND (2.56) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |
| MCPP | ND (2.59) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 16:49

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **72.3** (23.1) | --- | 8100M | --- | 2 | 05/08/24 23:24 | --- | DE40661 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *100 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 145** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **8.50** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.8** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:14 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/8/24 17:42

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **20.1** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | 100 2000 | DE40856 |
| **Temperature (Max C)** | **21.4** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | 100 2000 | DE40856 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND (0.86) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:44 | 2.56 | 100 | DE40606 |
| Barium | ND (0.86) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:44 | 2.56 | 100 | DE40606 |
| Cadmium | ND (0.43) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:44 | 2.56 | 100 | DE40606 |
| Chromium | ND (0.86) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:44 | 2.56 | 100 | DE40606 |
| Lead | ND (4.30) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:44 | 2.56 | 100 | DE40606 |
| **Mercury** | **0.131** (0.036) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:52 | 0.61 | 40 | DE40624 |
| Selenium | ND (4.30) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:44 | 2.56 | 100 | DE40606 |
| Silver | ND (0.43) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:44 | 2.56 | 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,1,1-Trichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,1,2,2-Tetrachloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,1,2-Trichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,1-Dichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,1-Dichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,1-Dichloropropene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,2,3-Trichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,2,3-Trichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,2,4-Trichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,2,4-Trimethylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,2-Dibromoethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,2-Dichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,2-Dichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,2-Dichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,3,5-Trimethylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,3-Dichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,3-Dichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,4-Dichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,4-Dioxane | ND (0.110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 2,2-Dichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 2-Butanone | ND (0.0551) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 2-Chlorotoluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 2-Hexanone | ND (0.0551) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 4-Chlorotoluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 4-Isopropyltoluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0551) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Acetone | ND (0.0551) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Benzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Bromobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Bromochloromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Bromodichloromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Bromoform | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Bromomethane | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Carbon Disulfide | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Carbon Tetrachloride | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Chlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Chloroethane | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Chloroform | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Chloromethane | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| cis-1,2-Dichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| cis-1,3-Dichloropropene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Dibromochloromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Dibromomethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Dichlorodifluoromethane | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Diethyl Ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Di-isopropyl ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Ethyl tertiary-butyl ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Ethylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Hexachlorobutadiene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Isopropylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Methyl tert-Butyl Ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Methylene Chloride | ND (0.0275) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| n-Butylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| n-Propylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| sec-Butylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Styrene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| tert-Butylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Tertiary-amyl methyl ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Tetrachloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Tetrahydrofuran | ND (0.0220) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Toluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| trans-1,2-Dichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| trans-1,3-Dichloropropene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Trichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Trichlorofluoromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Vinyl Chloride | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Xylene O | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Xylene P,M | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Xylenes (Total) | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *116 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *97 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *110 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.553) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Acetophenone | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Aniline | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Anthracene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Benzo(a)anthracene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Benzo(a)pyrene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Benzo(b)fluoranthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Benzo(g,h,i)perylene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Benzo(k)fluoranthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| bis(2-Ethylhexyl)phthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Butylbenzylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Chrysene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.553) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| **Fluoranthene** | **0.279** (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Fluorene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Indeno(1,2,3-cd)Pyrene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Isophorone | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Naphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Phenanthrene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Phenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| **Pyrene** | **0.365** (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Pyridine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *94 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *94 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *96 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *104 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *96 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *102 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *96 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *122 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:28 | --- | DE41008 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:28 | --- | DE41008 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:28 | --- | DE41008 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:28 | --- | DE41008 |
| **Aroclor 1248** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:28 | --- | DE41008 |
| **Aroclor 1254** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:28 | --- | DE41008 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:28 | --- | DE41008 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:28 | --- | DE41008 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:28 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *66 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *57 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 19.2g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Aldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0229) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Endrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Toxaphene | ND (0.143) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *79 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *65 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |
| 2,4-D | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |
| Dalapon | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |
| Dinoseb | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |
| MCPA | ND (2.51) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |
| MCPP | ND (2.54) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 16:49

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **63.4** (11.4) | --- | 8100M | --- | 1 | 05/08/24 17:33 | --- | DE40661 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *88 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 730** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **7.52** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.5** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:14 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **3.38** (0.73) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:48 | 2.98 | 100 | DE40606 |
| **Barium** | **18.1** (0.73) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:48 | 2.98 | 100 | DE40606 |
| Cadmium | ND (0.36) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:48 | 2.98 | 100 | DE40606 |
| **Chromium** | **6.30** (0.73) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:48 | 2.98 | 100 | DE40606 |
| **Lead** | **51.1** (3.65) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:48 | 2.98 | 100 | DE40606 |
| **Mercury** | **0.182** (0.033) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:54 | 0.65 | 40 | DE40624 |
| Selenium | ND (3.65) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:48 | 2.98 | 100 | DE40606 |
| Silver | ND (0.36) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:48 | 2.98 | 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 5.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,1,1-Trichloroethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,1,2,2-Tetrachloroethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,1,2-Trichloroethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,1-Dichloroethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,1-Dichloroethene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,1-Dichloropropene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,2,3-Trichlorobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,2,3-Trichloropropane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,2,4-Trichlorobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,2,4-Trimethylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,2-Dibromoethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,2-Dichlorobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,2-Dichloroethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,2-Dichloropropane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,3,5-Trimethylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,3-Dichlorobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,3-Dichloropropane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,4-Dichlorobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,4-Dioxane | ND (0.101) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 2,2-Dichloropropane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 2-Butanone | ND (0.0503) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 2-Chlorotoluene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 2-Hexanone | ND (0.0503) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 4-Chlorotoluene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 4-Isopropyltoluene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 5.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0503) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Acetone | ND (0.0503) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Benzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Bromobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Bromochloromethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Bromodichloromethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Bromoform | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Bromomethane | ND (0.0101) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Carbon Disulfide | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Carbon Tetrachloride | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Chlorobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Chloroethane | ND (0.0101) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Chloroform | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Chloromethane | ND (0.0101) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| cis-1,2-Dichloroethene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| cis-1,3-Dichloropropene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Dibromochloromethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Dibromomethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Dichlorodifluoromethane | ND (0.0101) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Diethyl Ether | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Di-isopropyl ether | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Ethyl tertiary-butyl ether | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Ethylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Hexachlorobutadiene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Isopropylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Methyl tert-Butyl Ether | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Methylene Chloride | ND (0.0252) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 5.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| n-Butylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| n-Propylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| sec-Butylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Styrene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| tert-Butylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Tertiary-amyl methyl ether | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Tetrachloroethene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Tetrahydrofuran | ND (0.0201) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Toluene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| trans-1,2-Dichloroethene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| trans-1,3-Dichloropropene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Trichloroethene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Trichlorofluoromethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Vinyl Chloride | ND (0.0101) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Xylene O | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Xylene P,M | ND (0.0101) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Xylenes (Total) | ND (0.0101) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *114 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *96 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *109 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.541) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Acetophenone | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Aniline | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Benzo(a)anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Benzo(a)pyrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Benzo(b)fluoranthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Benzo(g,h,i)perylene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Benzo(k)fluoranthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| bis(2-Ethylhexyl)phthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Butylbenzylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Chrysene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.541) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| **Fluoranthene** | **0.346** (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Fluorene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Indeno(1,2,3-cd)Pyrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Isophorone | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Naphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Phenanthrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Phenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| **Pyrene** | **0.438** (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Pyridine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *88 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *88 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *90 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *100 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *90 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *96 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *90 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *117 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 20.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 23:48 | --- | DE41008 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 23:48 | --- | DE41008 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 23:48 | --- | DE41008 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 23:48 | --- | DE41008 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 23:48 | --- | DE41008 |
| **Aroclor 1254** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/13/24 23:48 | --- | DE41008 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 23:48 | --- | DE41008 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 23:48 | --- | DE41008 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 23:48 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *71 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *65 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 20.5g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0212) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Toxaphene | ND (0.133) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *88 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |
| 2,4-D | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |
| Dalapon | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |
| Dinoseb | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |
| MCPA | ND (2.50) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |
| MCPP | ND (2.53) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 16:49

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **20.7** (11.0) | --- | 8100M | --- | 1 | 05/08/24 18:11 | --- | DE40661 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *90 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 269** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **8.38** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.6** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:19 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.40** (0.83) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:50 | 2.71 | 100 | DE40606 |
| **Barium** | **50.0** (0.83) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:50 | 2.71 | 100 | DE40606 |
| Cadmium | ND (0.42) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:50 | 2.71 | 100 | DE40606 |
| **Chromium** | **12.3** (0.83) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:50 | 2.71 | 100 | DE40606 |
| **Lead** | **441** (4.16) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:50 | 2.71 | 100 | DE40606 |
| **Mercury** | **0.138** (0.037) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:56 | 0.61 | 40 | DE40624 |
| Selenium | ND (4.16) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:50 | 2.71 | 100 | DE40606 |
| Silver | ND (0.42) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:50 | 2.71 | 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **3.25** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/10/24 15:03 | 50 50 | DE40923 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 5.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,1,1-Trichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,1,2,2-Tetrachloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,1,2-Trichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,1-Dichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,1-Dichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,1-Dichloropropene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,2,3-Trichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,2,3-Trichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,2,4-Trichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,2,4-Trimethylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,2-Dibromoethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,2-Dichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,2-Dichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,2-Dichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,3,5-Trimethylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,3-Dichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,3-Dichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,4-Dichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,4-Dioxane | ND (0.111) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 2,2-Dichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 2-Butanone | ND (0.0553) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 2-Chlorotoluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 2-Hexanone | ND (0.0553) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 4-Chlorotoluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 4-Isopropyltoluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 5.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0553) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Acetone | ND (0.0553) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Benzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Bromobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Bromochloromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Bromodichloromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Bromoform | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Bromomethane | ND (0.0111) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Carbon Disulfide | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Carbon Tetrachloride | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Chlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Chloroethane | ND (0.0111) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Chloroform | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Chloromethane | ND (0.0111) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| cis-1,2-Dichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| cis-1,3-Dichloropropene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Dibromochloromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Dibromomethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Dichlorodifluoromethane | ND (0.0111) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Diethyl Ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Di-isopropyl ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Ethyl tertiary-butyl ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Ethylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Hexachlorobutadiene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Isopropylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Methyl tert-Butyl Ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Methylene Chloride | ND (0.0277) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 5.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| n-Butylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| n-Propylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| sec-Butylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Styrene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| tert-Butylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Tertiary-amyl methyl ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Tetrachloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Tetrahydrofuran | ND (0.0221) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Toluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| trans-1,2-Dichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| trans-1,3-Dichloropropene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Trichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Trichlorofluoromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Vinyl Chloride | ND (0.0111) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Xylene O | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Xylene P,M | ND (0.0111) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Xylenes (Total) | ND (0.0111) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *119 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *95 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *114 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 1,2,4-Trichlorobenzene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 1,2-Dichlorobenzene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 1,3-Dichlorobenzene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 1,4-Dichlorobenzene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2,4,5-Trichlorophenol | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2,4,6-Trichlorophenol | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2,4-Dichlorophenol | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2,4-Dimethylphenol | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2,4-Dinitrophenol | ND (1.13) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2,4-Dinitrotoluene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2,6-Dinitrotoluene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2-Chloronaphthalene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2-Chlorophenol | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2-Methylnaphthalene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2-Methylphenol | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2-Nitrophenol | ND (0.564) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 3,3´-Dichlorobenzidine | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 3+4-Methylphenol | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 4-Bromophenyl-phenylether | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 4-Chloroaniline | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 4-Nitrophenol | ND (1.13) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Acenaphthene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Acenaphthylene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Acetophenone | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Aniline | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Anthracene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Benzo(a)anthracene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Benzo(a)pyrene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Benzo(b)fluoranthene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Benzo(g,h,i)perylene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Benzo(k)fluoranthene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| bis(2-Chloroethoxy)methane | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| bis(2-Chloroethyl)ether | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| bis(2-chloroisopropyl)Ether | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| bis(2-Ethylhexyl)phthalate | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Butylbenzylphthalate | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Chrysene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Dibenzo(a,h)Anthracene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Dibenzofuran | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Diethylphthalate | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Dimethylphthalate | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Di-n-butylphthalate | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Di-n-octylphthalate | ND (0.564) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| **Fluoranthene** | **0.308** (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Fluorene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Hexachlorobenzene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Hexachlorobutadiene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Hexachloroethane | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Indeno(1,2,3-cd)Pyrene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Isophorone | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Naphthalene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Nitrobenzene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Pentachlorophenol | ND (1.13) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Phenanthrene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Phenol | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| **Pyrene** | **0.293** (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Pyridine | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *82 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *124 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *80 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *92 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *78 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *82 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *80 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *112 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/14/24 0:08 | --- | DE41008 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/14/24 0:08 | --- | DE41008 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/14/24 0:08 | --- | DE41008 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/14/24 0:08 | --- | DE41008 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/14/24 0:08 | --- | DE41008 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/14/24 0:08 | --- | DE41008 |
| **Aroclor 1260** | **P 0.1** (0.06) | --- | 8082A | --- | 1 | 05/14/24 0:08 | --- | DE41008 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/14/24 0:08 | --- | DE41008 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/14/24 0:08 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *98 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *70 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 19.5g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4′-DDD | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| 4,4′-DDE | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| 4,4′-DDT | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Aldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| alpha-Chlordane [2C] | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0231) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Endrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Toxaphene | ND (0.145) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *97 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 10.5g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |
| 2,4-D | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |
| Dalapon | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |
| Dinoseb | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |
| MCPA | ND (2.50) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |
| MCPP | ND (2.53) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 16:49

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **27.5** (11.6) | --- | 8100M | --- | 1 | 05/08/24 21:29 | --- | DE40661 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *90 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 202** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **8.45** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.7** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:19 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/8/24 17:42

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **20.1** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | 100 2000 | DE40856 |
| **Temperature (Max C)** | **21.4** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | 100 2000 | DE40856 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.79** (0.80) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:52 | 2.68 | 100 | DE40606 |
| **Barium** | **21.6** (0.80) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:52 | 2.68 | 100 | DE40606 |
| Cadmium | ND (0.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:52 | 2.68 | 100 | DE40606 |
| **Chromium** | **10.1** (0.80) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:52 | 2.68 | 100 | DE40606 |
| **Lead** | **17.6** (4.00) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:52 | 2.68 | 100 | DE40606 |
| **Mercury** | **0.070** (0.034) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:58 | 0.63 | 40 | DE40624 |
| Selenium | ND (4.00) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:52 | 2.68 | 100 | DE40606 |
| Silver | ND (0.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:52 | 2.68 | 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,1,1-Trichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,1,2,2-Tetrachloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,1,2-Trichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,1-Dichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,1-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,1-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,2,3-Trichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,2,3-Trichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,2,4-Trichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,2,4-Trimethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,2-Dibromoethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,2-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,2-Dichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,2-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,3,5-Trimethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,3-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,3-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,4-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,4-Dioxane | ND (0.107) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 2,2-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 2-Butanone | ND (0.0536) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 2-Chlorotoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 2-Hexanone | ND (0.0536) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 4-Chlorotoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 4-Isopropyltoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0536) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Acetone | ND (0.0536) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Benzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Bromobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Bromochloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Bromodichloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Bromoform | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Bromomethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Carbon Disulfide | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Carbon Tetrachloride | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Chlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Chloroethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Chloroform | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Chloromethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| cis-1,2-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| cis-1,3-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Dibromochloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Dibromomethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Dichlorodifluoromethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Diethyl Ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Di-isopropyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Ethyl tertiary-butyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Ethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Hexachlorobutadiene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Isopropylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Methyl tert-Butyl Ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Methylene Chloride | ND (0.0268) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| n-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| n-Propylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| sec-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Styrene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| tert-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Tertiary-amyl methyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Tetrachloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Tetrahydrofuran | ND (0.0214) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Toluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| trans-1,2-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| trans-1,3-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Trichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Trichlorofluoromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Vinyl Chloride | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Xylene O | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Xylene P,M | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Xylenes (Total) | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *114 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *96 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *108 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 1,2,4-Trichlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 1,2-Dichlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 1,3-Dichlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 1,4-Dichlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2,4,5-Trichlorophenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2,4,6-Trichlorophenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2,4-Dichlorophenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2,4-Dimethylphenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2,4-Dinitrophenol | ND (1.03) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2,4-Dinitrotoluene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2,6-Dinitrotoluene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2-Chloronaphthalene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2-Chlorophenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2-Methylnaphthalene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2-Methylphenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2-Nitrophenol | ND (0.513) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 3,3´-Dichlorobenzidine | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 3+4-Methylphenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 4-Bromophenyl-phenylether | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 4-Chloroaniline | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 4-Nitrophenol | ND (1.03) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Acenaphthene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Acenaphthylene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Acetophenone | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Aniline | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Anthracene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Benzo(a)anthracene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Benzo(a)pyrene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Benzo(b)fluoranthene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Benzo(g,h,i)perylene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Benzo(k)fluoranthene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| bis(2-Chloroethoxy)methane | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| bis(2-Chloroethyl)ether | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| bis(2-chloroisopropyl)Ether | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| bis(2-Ethylhexyl)phthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Butylbenzylphthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Chrysene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Dibenzo(a,h)Anthracene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Dibenzofuran | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Diethylphthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Dimethylphthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Di-n-butylphthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Di-n-octylphthalate | ND (0.513) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Fluoranthene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Fluorene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Hexachlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Hexachlorobutadiene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Hexachloroethane | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Indeno(1,2,3-cd)Pyrene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Isophorone | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Naphthalene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Nitrobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Pentachlorophenol | ND (1.03) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Phenanthrene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Phenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Pyrene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Pyridine | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *85 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *128 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *84 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *95 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *82 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *85 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *83 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *116 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 12:54 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 12:54 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 12:54 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 12:54 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 12:54 | --- | DE41057 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/13/24 12:54 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 12:54 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 12:54 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 12:54 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *81 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *86 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 19.5g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4′-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| 4,4′-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| 4,4′-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0220) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Toxaphene | ND (0.137) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *99 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *88 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |
| MCPA | ND (2.42) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |
| MCPP | ND (2.45) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *70 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 16:49

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **17.9** (11.1) | --- | 8100M | --- | 1 | 05/08/24 18:50 | --- | DE40661 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *87 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 306** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **8.22** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.7** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:19 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **5.81** (0.92) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:54 | 2.5 | 100 | DE40606 |
| **Barium** | **24.1** (0.92) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:54 | 2.5 | 100 | DE40606 |
| Cadmium | ND (0.46) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:54 | 2.5 | 100 | DE40606 |
| **Chromium** | **19.8** (0.92) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:54 | 2.5 | 100 | DE40606 |
| **Lead** | **27.3** (4.58) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:54 | 2.5 | 100 | DE40606 |
| **Mercury** | **0.093** (0.038) | --- | 7471B | --- | 1 | AFV | 05/06/24 17:00 | 0.6 | 40 | DE40624 |
| Selenium | ND (4.58) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:54 | 2.5 | 100 | DE40606 |
| Silver | ND (0.46) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:54 | 2.5 | 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 5.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,1,1-Trichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,1,2,2-Tetrachloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,1,2-Trichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,1-Dichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,1-Dichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,1-Dichloropropene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,2,3-Trichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,2,3-Trichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,2,4-Trichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,2,4-Trimethylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,2-Dibromoethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,2-Dichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,2-Dichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,2-Dichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,3,5-Trimethylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,3-Dichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,3-Dichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,4-Dichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,4-Dioxane | ND (0.110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 2,2-Dichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 2-Butanone | ND (0.0550) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 2-Chlorotoluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 2-Hexanone | ND (0.0550) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 4-Chlorotoluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 4-Isopropyltoluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 5.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0550) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| **Acetone** | **0.0907** (0.0550) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Benzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Bromobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Bromochloromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Bromodichloromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Bromoform | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Bromomethane | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Carbon Disulfide | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Carbon Tetrachloride | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Chlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Chloroethane | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Chloroform | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Chloromethane | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| cis-1,2-Dichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| cis-1,3-Dichloropropene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Dibromochloromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Dibromomethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Dichlorodifluoromethane | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Diethyl Ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Di-isopropyl ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Ethyl tertiary-butyl ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Ethylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Hexachlorobutadiene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Isopropylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Methyl tert-Butyl Ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Methylene Chloride | ND (0.0275) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 5.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| n-Butylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| n-Propylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| sec-Butylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Styrene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| tert-Butylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Tertiary-amyl methyl ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Tetrachloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Tetrahydrofuran | ND (0.0220) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Toluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| trans-1,2-Dichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| trans-1,3-Dichloropropene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Trichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Trichlorofluoromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Vinyl Chloride | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Xylene O | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Xylene P,M | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Xylenes (Total) | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *119 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *95 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *110 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 1,2,4-Trichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 1,2-Dichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 1,3-Dichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 1,4-Dichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2,4,5-Trichlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2,4,6-Trichlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2,4-Dichlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2,4-Dimethylphenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2,4-Dinitrophenol | ND (1.10) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2,4-Dinitrotoluene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2,6-Dinitrotoluene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2-Chloronaphthalene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2-Chlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2-Methylnaphthalene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2-Methylphenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2-Nitrophenol | ND (0.548) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 3,3´-Dichlorobenzidine | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 3+4-Methylphenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 4-Bromophenyl-phenylether | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 4-Chloroaniline | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 4-Nitrophenol | ND (1.10) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Acenaphthene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Acenaphthylene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Acetophenone | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Aniline | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Anthracene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Benzo(a)anthracene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Benzo(a)pyrene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Benzo(b)fluoranthene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Benzo(g,h,i)perylene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Benzo(k)fluoranthene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| bis(2-Chloroethoxy)methane | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| bis(2-Chloroethyl)ether | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| bis(2-chloroisopropyl)Ether | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| bis(2-Ethylhexyl)phthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Butylbenzylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Chrysene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Dibenzo(a,h)Anthracene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Dibenzofuran | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Diethylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Dimethylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Di-n-butylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Di-n-octylphthalate | ND (0.548) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Fluoranthene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Fluorene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Hexachlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Hexachlorobutadiene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Hexachloroethane | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Indeno(1,2,3-cd)Pyrene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Isophorone | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Naphthalene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Nitrobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Pentachlorophenol | ND (1.10) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Phenanthrene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Phenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Pyrene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Pyridine | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *77 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *111 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *72 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *84 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *71 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *76 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *70 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *102 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 20.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 13:14 | --- | DE41057 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 13:14 | --- | DE41057 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 13:14 | --- | DE41057 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 13:14 | --- | DE41057 |
| **Aroclor 1248** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/13/24 13:14 | --- | DE41057 |
| **Aroclor 1254** | **0.3** (0.06) | --- | 8082A | --- | 1 | 05/13/24 13:14 | --- | DE41057 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 13:14 | --- | DE41057 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 13:14 | --- | DE41057 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 13:14 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *66 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 19.6g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Aldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0234) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Endrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0018) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Toxaphene | ND (0.146) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *95 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |
| 2,4-D | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.053) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |
| Dalapon | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |
| Dinoseb | ND (0.053) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |
| MCPA | ND (2.58) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |
| MCPP | ND (2.61) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 16:49

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (11.9) | --- | 8100M | --- | 1 | 05/08/24 19:30 | --- | DE40661 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *84 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 177** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **6.90** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.7** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:24 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **3.94** (0.78) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:56 | 2.77 | 100 | DE40606 |
| **Barium** | **14.2** (0.78) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:56 | 2.77 | 100 | DE40606 |
| Cadmium | ND (0.39) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:56 | 2.77 | 100 | DE40606 |
| **Chromium** | **9.60** (0.78) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:56 | 2.77 | 100 | DE40606 |
| **Lead** | **19.4** (3.92) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:56 | 2.77 | 100 | DE40606 |
| **Mercury** | **0.127** (0.036) | --- | 7471B | --- | 1 | AFV | 05/06/24 17:02 | 0.6 | 40 | DE40624 |
| Selenium | ND (3.92) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:56 | 2.77 | 100 | DE40606 |
| Silver | ND (0.39) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:56 | 2.77 | 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,1,1-Trichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,1,2,2-Tetrachloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,1,2-Trichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,1-Dichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,1-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,1-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,2,3-Trichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,2,3-Trichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,2,4-Trichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,2,4-Trimethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,2-Dibromoethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,2-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,2-Dichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,2-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,3,5-Trimethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,3-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,3-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,4-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,4-Dioxane | ND (0.0952) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 2,2-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 2-Butanone | ND (0.0476) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 2-Chlorotoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 2-Hexanone | ND (0.0476) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 4-Chlorotoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 4-Isopropyltoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0476) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Acetone | ND (0.0476) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Benzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Bromobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Bromochloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Bromodichloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Bromoform | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Bromomethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Carbon Disulfide | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Carbon Tetrachloride | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Chlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Chloroethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Chloroform | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Chloromethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| cis-1,2-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| cis-1,3-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Dibromochloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Dibromomethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Dichlorodifluoromethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Diethyl Ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Di-isopropyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Ethyl tertiary-butyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Ethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Hexachlorobutadiene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Isopropylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Methyl tert-Butyl Ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Methylene Chloride | ND (0.0238) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| n-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| n-Propylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| sec-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Styrene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| tert-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Tertiary-amyl methyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Tetrachloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Tetrahydrofuran | ND (0.0190) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Toluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| trans-1,2-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| trans-1,3-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Trichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Trichlorofluoromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Vinyl Chloride | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Xylene O | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Xylene P,M | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Xylenes (Total) | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *116 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *99 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *110 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.035** (0.027) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 1,2,4-Trichlorobenzene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 1,2-Dichlorobenzene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 1,3-Dichlorobenzene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 1,4-Dichlorobenzene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2,4,5-Trichlorophenol | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2,4,6-Trichlorophenol | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2,4-Dichlorophenol | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2,4-Dimethylphenol | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2,4-Dinitrophenol | ND (1.07) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2,4-Dinitrotoluene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2,6-Dinitrotoluene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2-Chloronaphthalene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2-Chlorophenol | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2-Methylnaphthalene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2-Methylphenol | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2-Nitrophenol | ND (0.535) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 3,3´-Dichlorobenzidine | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 3+4-Methylphenol | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 4-Bromophenyl-phenylether | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 4-Chloroaniline | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 4-Nitrophenol | ND (1.07) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Acenaphthene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Acenaphthylene** | **1.05** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Acetophenone | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Aniline | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Anthracene** | **0.824** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Benzo(a)anthracene** | **3.22** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Benzo(a)pyrene** | **2.23** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Benzo(b)fluoranthene** | **2.20** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Benzo(g,h,i)perylene** | **1.19** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Benzo(k)fluoranthene** | **0.711** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| bis(2-Chloroethoxy)methane | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| bis(2-Chloroethyl)ether | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| bis(2-chloroisopropyl)Ether | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| bis(2-Ethylhexyl)phthalate | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Butylbenzylphthalate | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Chrysene** | **4.09** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Dibenzo(a,h)Anthracene** | **0.376** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Dibenzofuran | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Diethylphthalate | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Dimethylphthalate | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Di-n-butylphthalate | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Di-n-octylphthalate | ND (0.535) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Fluoranthene** | **3.58** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Fluorene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Hexachlorobenzene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Hexachlorobutadiene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Hexachloroethane | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Indeno(1,2,3-cd)Pyrene** | **1.00** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Isophorone | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Naphthalene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Nitrobenzene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Pentachlorophenol | ND (1.07) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Phenanthrene** | **2.48** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Phenol | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Pyrene** | **5.88** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Pyridine | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *85 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *114 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *81 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *90 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *79 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *84 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *78 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *105 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:33 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:33 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:33 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:33 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:33 | --- | DE41057 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:33 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:33 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:33 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:33 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *79 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 19g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4′-DDD | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| 4,4′-DDE | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| 4,4′-DDT | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Aldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0228) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Endrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Toxaphene | ND (0.143) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *90 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |
| 2,4-D | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |
| Dalapon | ND (0.048) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |
| MCPA | ND (2.45) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |
| MCPP | ND (2.48) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 17:41

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **16.0** (11.2) | --- | 8100M | --- | 1 | 05/07/24 21:30 | --- | DE40662 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *75 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 104** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **7.58** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.7** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:24 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **6.30** (0.82) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:58 | 2.7 100 | DE40606 |
| **Barium** | **44.7** (0.82) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:58 | 2.7 100 | DE40606 |
| Cadmium | ND (0.41) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:58 | 2.7 100 | DE40606 |
| **Chromium** | **15.4** (0.82) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:58 | 2.7 100 | DE40606 |
| **Lead** | **107** (4.12) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:58 | 2.7 100 | DE40606 |
| **Mercury** | **0.259** (0.037) | --- | 7471B | --- | 1 | AFV | 05/06/24 17:04 | 0.6 40 | DE40624 |
| Selenium | ND (4.12) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:58 | 2.7 100 | DE40606 |
| Silver | ND (0.41) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:58 | 2.7 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.29** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/10/24 15:05 | 50 50 | DE40923 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,1,1-Trichloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,1,2,2-Tetrachloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,1,2-Trichloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,1-Dichloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,1-Dichloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,1-Dichloropropene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,2,3-Trichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,2,3-Trichloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,2,4-Trichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,2,4-Trimethylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,2-Dibromoethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,2-Dichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,2-Dichloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,2-Dichloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,3,5-Trimethylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,3-Dichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,3-Dichloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,4-Dichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,4-Dioxane | ND (0.0943) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 2,2-Dichloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 2-Butanone | ND (0.0471) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 2-Chlorotoluene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 2-Hexanone | ND (0.0471) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 4-Chlorotoluene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 4-Isopropyltoluene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0471) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Acetone | ND (0.0471) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Benzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Bromobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Bromochloromethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Bromodichloromethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Bromoform | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Bromomethane | ND (0.0094) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Carbon Disulfide | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Carbon Tetrachloride | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Chlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Chloroethane | ND (0.0094) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Chloroform | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Chloromethane | ND (0.0094) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| cis-1,2-Dichloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| cis-1,3-Dichloropropene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Dibromochloromethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Dibromomethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Dichlorodifluoromethane | ND (0.0094) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Diethyl Ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Di-isopropyl ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Ethyl tertiary-butyl ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Ethylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Hexachlorobutadiene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Isopropylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Methyl tert-Butyl Ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Methylene Chloride | ND (0.0236) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| n-Butylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| n-Propylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| sec-Butylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Styrene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| tert-Butylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Tertiary-amyl methyl ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Tetrachloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Tetrahydrofuran | ND (0.0189) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Toluene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| trans-1,2-Dichloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| trans-1,3-Dichloropropene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Trichloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Trichlorofluoromethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Vinyl Chloride | ND (0.0094) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Xylene O | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Xylene P,M | ND (0.0094) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Xylenes (Total) | ND (0.0094) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *117 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *96 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *110 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 1,2,4-Trichlorobenzene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 1,2-Dichlorobenzene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 1,3-Dichlorobenzene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 1,4-Dichlorobenzene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2,4,5-Trichlorophenol | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2,4,6-Trichlorophenol | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2,4-Dichlorophenol | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2,4-Dimethylphenol | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2,4-Dinitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2,4-Dinitrotoluene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2,6-Dinitrotoluene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2-Chloronaphthalene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2-Chlorophenol | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2-Methylnaphthalene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2-Methylphenol | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2-Nitrophenol | ND (0.556) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 3,3´-Dichlorobenzidine | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 3+4-Methylphenol | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 4-Bromophenyl-phenylether | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 4-Chloroaniline | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 4-Nitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Acenaphthene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Acenaphthylene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Acetophenone | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Aniline | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Anthracene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| **Benzo(a)anthracene** | **0.382** (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| **Benzo(a)pyrene** | **0.398** (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| **Benzo(b)fluoranthene** | **0.462** (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Benzo(g,h,i)perylene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Benzo(k)fluoranthene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| bis(2-Chloroethoxy)methane | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| bis(2-Chloroethyl)ether | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| bis(2-chloroisopropyl)Ether | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| bis(2-Ethylhexyl)phthalate | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Butylbenzylphthalate | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| **Chrysene** | **0.434** (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Dibenzo(a,h)Anthracene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Dibenzofuran | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Diethylphthalate | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Dimethylphthalate | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Di-n-butylphthalate | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Di-n-octylphthalate | ND (0.556) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| **Fluoranthene** | **0.733** (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Fluorene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Hexachlorobenzene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Hexachlorobutadiene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Hexachloroethane | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Indeno(1,2,3-cd)Pyrene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Isophorone | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Naphthalene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Nitrobenzene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Pentachlorophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| **Phenanthrene** | **0.382** (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Phenol | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| **Pyrene** | **0.687** (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Pyridine | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *88 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *117 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *86 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *94 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *84 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *85 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *82 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *108 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 20.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:53 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:53 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:53 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:53 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:53 | --- | DE41057 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:53 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:53 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:53 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:53 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *77 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *85 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 19.1g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| 4,4´-DDE [2C] | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| **4,4´-DDT** | **P, LC 0.0082** (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Aldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| beta-BHC [2C] | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0233) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Dieldrin [2C] | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Endrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Toxaphene | ND (0.146) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *94 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 10.5g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |
| 2,4-D | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |
| Dalapon | ND (0.048) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |
| MCPA | ND (2.46) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |
| MCPP | ND (2.49) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 17:41

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **28.1** (11.3) | --- | 8100M | --- | 1 | 05/07/24 22:10 | --- | DE40662 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *71 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 39** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **6.92** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.7** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:24 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/8/24 17:42

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **20.1** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | 100 2000 | DE40856 |
| **Temperature (Max C)** | **21.4** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | 100 2000 | DE40856 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **5.39** (0.73) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:13 | 2.88 | 100 | DE40606 |
| **Barium** | **31.9** (0.73) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:13 | 2.88 | 100 | DE40606 |
| Cadmium | ND (0.36) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:13 | 2.88 | 100 | DE40606 |
| **Chromium** | **11.1** (0.73) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:13 | 2.88 | 100 | DE40606 |
| **Lead** | **188** (3.64) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:13 | 2.88 | 100 | DE40606 |
| **Mercury** | **0.145** (0.032) | --- | 7471B | --- | 1 | AFV | 05/06/24 17:19 | 0.65 | 40 | DE40624 |
| Selenium | ND (3.64) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:13 | 2.88 | 100 | DE40606 |
| Silver | ND (0.36) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:13 | 2.88 | 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.17** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/10/24 15:08 | 50 50 | DE40923 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,1,1-Trichloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,1,2,2-Tetrachloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,1,2-Trichloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,1-Dichloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,1-Dichloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,1-Dichloropropene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,2,3-Trichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,2,3-Trichloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,2,4-Trichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,2,4-Trimethylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,2-Dibromoethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,2-Dichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,2-Dichloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,2-Dichloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,3,5-Trimethylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,3-Dichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,3-Dichloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,4-Dichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,4-Dioxane | ND (0.131) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 2,2-Dichloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 2-Butanone | ND (0.0655) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 2-Chlorotoluene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 2-Hexanone | ND (0.0655) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 4-Chlorotoluene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 4-Isopropyltoluene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0655) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Acetone | ND (0.0655) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Benzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Bromobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Bromochloromethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Bromodichloromethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Bromoform | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Bromomethane | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Carbon Disulfide | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Carbon Tetrachloride | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Chlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Chloroethane | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Chloroform | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Chloromethane | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| cis-1,2-Dichloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| cis-1,3-Dichloropropene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Dibromochloromethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Dibromomethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Dichlorodifluoromethane | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Diethyl Ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Di-isopropyl ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Ethyl tertiary-butyl ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Ethylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Hexachlorobutadiene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Isopropylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Methyl tert-Butyl Ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Methylene Chloride | ND (0.0327) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| n-Butylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| n-Propylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| sec-Butylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Styrene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| tert-Butylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Tertiary-amyl methyl ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Tetrachloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Tetrahydrofuran | ND (0.0262) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Toluene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| trans-1,2-Dichloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| trans-1,3-Dichloropropene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Trichloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Trichlorofluoromethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Vinyl Chloride | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Xylene O | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Xylene P,M | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Xylenes (Total) | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *114 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *98 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *111 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 1,2,4-Trichlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 1,2-Dichlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 1,3-Dichlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 1,4-Dichlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2,4,5-Trichlorophenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2,4,6-Trichlorophenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2,4-Dichlorophenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2,4-Dimethylphenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2,4-Dinitrophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2,4-Dinitrotoluene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2,6-Dinitrotoluene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2-Chloronaphthalene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2-Chlorophenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2-Methylnaphthalene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2-Methylphenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2-Nitrophenol | ND (0.529) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 3,3´-Dichlorobenzidine | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 3+4-Methylphenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 4-Bromophenyl-phenylether | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 4-Chloroaniline | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 4-Nitrophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Acenaphthene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Acenaphthylene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Acetophenone | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Aniline | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Anthracene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| **Benzo(a)anthracene** | **0.287** (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| **Benzo(a)pyrene** | **0.318** (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| **Benzo(b)fluoranthene** | **0.355** (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Benzo(g,h,i)perylene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Benzo(k)fluoranthene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| bis(2-Chloroethoxy)methane | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| bis(2-Chloroethyl)ether | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| bis(2-chloroisopropyl)Ether | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| bis(2-Ethylhexyl)phthalate | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Butylbenzylphthalate | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| **Chrysene** | **0.317** (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Dibenzo(a,h)Anthracene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Dibenzofuran | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Diethylphthalate | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Dimethylphthalate | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Di-n-butylphthalate | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Di-n-octylphthalate | ND (0.529) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| **Fluoranthene** | **0.526** (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Fluorene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Hexachlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Hexachlorobutadiene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Hexachloroethane | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Indeno(1,2,3-cd)Pyrene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Isophorone | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Naphthalene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Nitrobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Pentachlorophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| **Phenanthrene** | **0.272** (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Phenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| **Pyrene** | **0.518** (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Pyridine | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *86 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *115 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *84 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *90 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *80 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *84 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *81 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *105 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:12 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:12 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:12 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:12 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:12 | --- | DE41057 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:12 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:12 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:12 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:12 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 19.6g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4′-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| 4,4′-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| 4,4′-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0214) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Toxaphene | ND (0.134) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *64 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |
| 2,4-D | ND (0.048) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.048) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |
| MCPA | ND (2.39) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |
| MCPP | ND (2.41) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *64 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 17:41

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **36.8** (10.5) | --- | 8100M | --- | 1 | 05/07/24 22:48 | --- | DE40662 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *75 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 124** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **7.96** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.6** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:29 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/8/24 17:42

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **20.1** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | 100 2000 | DE40856 |
| **Temperature (Max C)** | **21.4** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | 100 2000 | DE40856 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.99** (0.77) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:15 | 2.7 | 100 | DE40606 |
| **Barium** | **14.9** (0.77) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:15 | 2.7 | 100 | DE40606 |
| Cadmium | ND (0.39) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:15 | 2.7 | 100 | DE40606 |
| **Chromium** | **5.89** (0.77) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:15 | 2.7 | 100 | DE40606 |
| **Lead** | **53.5** (3.87) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:15 | 2.7 | 100 | DE40606 |
| **Mercury** | **0.359** (0.031) | --- | 7471B | --- | 1 | AFV | 05/06/24 17:21 | 0.66 | 40 | DE40624 |
| Selenium | ND (3.87) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:15 | 2.7 | 100 | DE40606 |
| Silver | ND (0.39) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:15 | 2.7 | 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 4.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,1,1-Trichloroethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,1,2,2-Tetrachloroethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,1,2-Trichloroethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,1-Dichloroethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,1-Dichloroethene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,1-Dichloropropene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,2,3-Trichlorobenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,2,3-Trichloropropane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,2,4-Trichlorobenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,2,4-Trimethylbenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,2-Dibromoethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,2-Dichlorobenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,2-Dichloroethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,2-Dichloropropane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,3,5-Trimethylbenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,3-Dichlorobenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,3-Dichloropropane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,4-Dichlorobenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,4-Dioxane | ND (0.116) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 2,2-Dichloropropane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 2-Butanone | ND (0.0581) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 2-Chlorotoluene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 2-Hexanone | ND (0.0581) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 4-Chlorotoluene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 4-Isopropyltoluene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 4.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0581) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Acetone | ND (0.0581) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Benzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Bromobenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Bromochloromethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Bromodichloromethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Bromoform | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Bromomethane | ND (0.0116) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Carbon Disulfide | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Carbon Tetrachloride | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Chlorobenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Chloroethane | ND (0.0116) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Chloroform | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Chloromethane | ND (0.0116) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| cis-1,2-Dichloroethene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| cis-1,3-Dichloropropene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Dibromochloromethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Dibromomethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Dichlorodifluoromethane | ND (0.0116) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Diethyl Ether | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Di-isopropyl ether | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Ethyl tertiary-butyl ether | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Ethylbenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Hexachlorobutadiene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Isopropylbenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Methyl tert-Butyl Ether | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Methylene Chloride | ND (0.0291) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 4.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| n-Butylbenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| n-Propylbenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| sec-Butylbenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Styrene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| tert-Butylbenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Tertiary-amyl methyl ether | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Tetrachloroethene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Tetrahydrofuran | ND (0.0232) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Toluene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| trans-1,2-Dichloroethene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| trans-1,3-Dichloropropene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Trichloroethene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Trichlorofluoromethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Vinyl Chloride | ND (0.0116) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Xylene O | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Xylene P,M | ND (0.0116) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Xylenes (Total) | ND (0.0116) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *114 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *97 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *109 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.025) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 1,2,4-Trichlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 1,2-Dichlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 1,3-Dichlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 1,4-Dichlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2,4,5-Trichlorophenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2,4,6-Trichlorophenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2,4-Dichlorophenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2,4-Dimethylphenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2,4-Dinitrophenol | ND (1.00) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2,4-Dinitrotoluene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2,6-Dinitrotoluene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2-Chloronaphthalene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2-Chlorophenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2-Methylnaphthalene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2-Methylphenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2-Nitrophenol | ND (0.500) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 3,3´-Dichlorobenzidine | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 3+4-Methylphenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 4-Bromophenyl-phenylether | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 4-Chloroaniline | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 4-Nitrophenol | ND (1.00) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Acenaphthene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Acenaphthylene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Acetophenone | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Aniline | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Anthracene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| **Benzo(a)anthracene** | **0.326** (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| **Benzo(a)pyrene** | **0.359** (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| **Benzo(b)fluoranthene** | **0.365** (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Benzo(g,h,i)perylene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Benzo(k)fluoranthene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| bis(2-Chloroethoxy)methane | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| bis(2-Chloroethyl)ether | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| bis(2-chloroisopropyl)Ether | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| bis(2-Ethylhexyl)phthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Butylbenzylphthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| **Chrysene** | **0.319** (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Dibenzo(a,h)Anthracene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Dibenzofuran | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Diethylphthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Dimethylphthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Di-n-butylphthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Di-n-octylphthalate | ND (0.500) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| **Fluoranthene** | **0.505** (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Fluorene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Hexachlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Hexachlorobutadiene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Hexachloroethane | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Indeno(1,2,3-cd)Pyrene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Isophorone | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Naphthalene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Nitrobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Pentachlorophenol | ND (1.00) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Phenanthrene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Phenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| **Pyrene** | **0.598** (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Pyridine | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *83 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *116 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *81 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *91 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *77 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *83 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *78 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *106 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 19.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:32 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:32 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:32 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:32 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:32 | --- | DE41057 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:32 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:32 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:32 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:32 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *74 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 20.3g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4′-DDD | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| 4,4′-DDE | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| 4,4′-DDT | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Aldrin | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0206) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Endrin | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0015) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Toxaphene | ND (0.129) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |
| 2,4-D | ND (0.048) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.048) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |
| MCPA | ND (2.38) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |
| MCPP | ND (2.41) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *67 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 17:41

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **20.6** (11.0) | --- | 8100M | --- | 1 | 05/07/24 23:27 | --- | DE40662 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *73 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 206** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **8.70** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.6** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:29 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **6.92** (1.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:30 | 2.8 100 | DE40606 |
| **Barium** | **55.4** (1.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:30 | 2.8 100 | DE40606 |
| Cadmium | ND (0.70) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:30 | 2.8 100 | DE40606 |
| **Chromium** | **9.25** (1.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:30 | 2.8 100 | DE40606 |
| **Lead** | **21.4** (6.98) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:30 | 2.8 100 | DE40606 |
| Mercury | ND (0.063) | --- | 7471B | --- | 1 | AFV | 05/06/24 17:23 | 0.61 40 | DE40624 |
| Selenium | ND (6.98) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:30 | 2.8 100 | DE40606 |
| Silver | ND (0.70) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:30 | 2.8 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 3.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,1,1-Trichloroethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,1,2,2-Tetrachloroethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,1,2-Trichloroethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,1-Dichloroethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,1-Dichloroethene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,1-Dichloropropene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,2,3-Trichlorobenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,2,3-Trichloropropane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,2,4-Trichlorobenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,2,4-Trimethylbenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,2-Dibromoethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,2-Dichlorobenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,2-Dichloroethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,2-Dichloropropane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,3,5-Trimethylbenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,3-Dichlorobenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,3-Dichloropropane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,4-Dichlorobenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,4-Dioxane | ND (0.296) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 2,2-Dichloropropane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 2-Butanone | ND (0.148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 2-Chlorotoluene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 2-Hexanone | ND (0.148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 4-Chlorotoluene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 4-Isopropyltoluene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 3.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| **Acetone** | **0.246** (0.148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Benzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Bromobenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Bromochloromethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Bromodichloromethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Bromoform | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Bromomethane | ND (0.0296) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Carbon Disulfide | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Carbon Tetrachloride | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Chlorobenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Chloroethane | ND (0.0296) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Chloroform | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Chloromethane | ND (0.0296) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| cis-1,2-Dichloroethene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| cis-1,3-Dichloropropene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Dibromochloromethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Dibromomethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Dichlorodifluoromethane | ND (0.0296) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Diethyl Ether | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Di-isopropyl ether | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Ethyl tertiary-butyl ether | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Ethylbenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Hexachlorobutadiene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Isopropylbenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Methyl tert-Butyl Ether | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Methylene Chloride | ND (0.0741) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 3.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| n-Butylbenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| n-Propylbenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| sec-Butylbenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Styrene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| tert-Butylbenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Tertiary-amyl methyl ether | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Tetrachloroethene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Tetrahydrofuran | ND (0.0593) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Toluene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| trans-1,2-Dichloroethene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| trans-1,3-Dichloropropene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Trichloroethene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Trichlorofluoromethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Vinyl Chloride | ND (0.0296) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Xylene O | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Xylene P,M | ND (0.0296) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Xylenes (Total) | ND (0.0296) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *121 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *92 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *111 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *106 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.099) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 1,2,4-Trichlorobenzene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 1,2-Dichlorobenzene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 1,3-Dichlorobenzene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 1,4-Dichlorobenzene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2,4,5-Trichlorophenol | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2,4,6-Trichlorophenol | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2,4-Dichlorophenol | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2,4-Dimethylphenol | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2,4-Dinitrophenol | ND (3.95) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2,4-Dinitrotoluene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2,6-Dinitrotoluene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2-Chloronaphthalene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2-Chlorophenol | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2-Methylnaphthalene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2-Methylphenol | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2-Nitrophenol | ND (1.98) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 3,3´-Dichlorobenzidine | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 3+4-Methylphenol | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 4-Bromophenyl-phenylether | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 4-Chloroaniline | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 4-Nitrophenol | ND (3.95) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Acenaphthene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Acenaphthylene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Acetophenone | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Aniline | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Anthracene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Benzo(a)anthracene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Benzo(a)pyrene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Benzo(b)fluoranthene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Benzo(g,h,i)perylene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Benzo(k)fluoranthene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| bis(2-Chloroethoxy)methane | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| bis(2-Chloroethyl)ether | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| bis(2-chloroisopropyl)Ether | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| bis(2-Ethylhexyl)phthalate | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Butylbenzylphthalate | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Chrysene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Dibenzo(a,h)Anthracene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Dibenzofuran | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Diethylphthalate | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Dimethylphthalate | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Di-n-butylphthalate | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Di-n-octylphthalate | ND (1.98) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Fluoranthene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Fluorene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Hexachlorobenzene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Hexachlorobutadiene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Hexachloroethane | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Indeno(1,2,3-cd)Pyrene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Isophorone | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Naphthalene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Nitrobenzene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Pentachlorophenol | ND (3.95) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Phenanthrene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Phenol | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Pyrene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Pyridine | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *56 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *87 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *57 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *71 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *51 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *70 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *52 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *80 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 19g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.1) | --- | 8082A | --- | 1 | 05/13/24 18:07 | --- | DE41057 |
| Aroclor 1221 | ND (0.1) | --- | 8082A | --- | 1 | 05/13/24 18:07 | --- | DE41057 |
| Aroclor 1232 | ND (0.1) | --- | 8082A | --- | 1 | 05/13/24 18:07 | --- | DE41057 |
| Aroclor 1242 | ND (0.1) | --- | 8082A | --- | 1 | 05/13/24 18:07 | --- | DE41057 |
| Aroclor 1248 | ND (0.1) | --- | 8082A | --- | 1 | 05/13/24 18:07 | --- | DE41057 |
| Aroclor 1254 | ND (0.1) | --- | 8082A | --- | 1 | 05/13/24 18:07 | --- | DE41057 |
| Aroclor 1260 | ND (0.1) | --- | 8082A | --- | 1 | 05/13/24 18:07 | --- | DE41057 |
| Aroclor 1262 | ND (0.1) | --- | 8082A | --- | 1 | 05/13/24 18:07 | --- | DE41057 |
| Aroclor 1268 | ND (0.1) | --- | 8082A | --- | 1 | 05/13/24 18:07 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *78 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 19g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/8/24 11:45

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| 4,4´-DDE | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| 4,4´-DDT | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Aldrin | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| alpha-BHC | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| alpha-Chlordane | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| beta-BHC | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Chlordane (Total) | ND (0.0412) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| delta-BHC | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Dieldrin | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Endosulfan I | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Endosulfan II | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Endosulfan Sulfate | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Endrin | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Endrin Ketone | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| gamma-BHC (Lindane) | ND (0.0031) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| gamma-Chlordane | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Heptachlor | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Heptachlor Epoxide | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Hexachlorobenzene | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Methoxychlor | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Toxaphene | ND (0.257) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.018) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.018) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |
| 2,4-D | ND (0.091) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.092) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |
| Dalapon | ND (0.088) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |
| Dicamba | ND (0.018) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.091) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |
| Dinoseb | ND (0.092) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |
| MCPA | ND (4.50) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |
| MCPP | ND (4.55) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | 49 % | | 30-150 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/7/24 20:45

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **273** (20.1) | --- | 8100M | --- | 1 | 05/09/24 7:47 | --- | DE40755 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *64 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 328** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **7.28** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.4** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/07/24 16:26 | ml/5 min | DE40735 |
| Reactive Cyanide | ND (3.7) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DE40606 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Arsenic | ND | 1.00 | mg/kg wet | | | | | | | |
| Barium | ND | 1.00 | mg/kg wet | | | | | | | |
| Cadmium | ND | 0.50 | mg/kg wet | | | | | | | |
| Chromium | ND | 1.00 | mg/kg wet | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| Selenium | ND | 5.00 | mg/kg wet | | | | | | | |
| Silver | ND | 0.50 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Arsenic | 70.1 | 3.33 | mg/kg wet | 75.60 | | 93 | 80-120 | | | |
| Barium | 819 | 3.33 | mg/kg wet | 372.0 | | 220 | 40-297 | | | |
| Cadmium | 239 | 1.67 | mg/kg wet | 259.0 | | 92 | 80-120 | | | |
| Chromium | 148 | 3.33 | mg/kg wet | 156.0 | | 95 | 80-120 | | | |
| Lead | 207 | 16.7 | mg/kg wet | 225.0 | | 92 | 80-120 | | | |
| Selenium | 73.3 | 16.7 | mg/kg wet | 82.70 | | 89 | 80-120 | | | |
| Silver | 48.6 | 1.67 | mg/kg wet | 51.00 | | 95 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Arsenic | 68.4 | 3.08 | mg/kg wet | 75.60 | | 90 | 80-120 | 2 | 30 | |
| Barium | 782 | 3.08 | mg/kg wet | 372.0 | | 210 | 40-297 | 5 | 30 | |
| Cadmium | 230 | 1.54 | mg/kg wet | 259.0 | | 89 | 80-120 | 4 | 30 | |
| Chromium | 142 | 3.08 | mg/kg wet | 156.0 | | 91 | 80-120 | 4 | 30 | |
| Lead | 201 | 15.4 | mg/kg wet | 225.0 | | 89 | 80-120 | 3 | 30 | |
| Selenium | 71.0 | 15.4 | mg/kg wet | 82.70 | | 86 | 80-120 | 3 | 30 | |
| Silver | 46.9 | 1.54 | mg/kg wet | 51.00 | | 92 | 80-120 | 4 | 30 | |
| **Batch DE40624 - 245.1/7470A** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Mercury | ND | 0.033 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Mercury | 22.1 | 2.91 | mg/kg wet | 25.50 | | 86 | 71-125 | | | |
| **LCS Dup** | | | | | | | | | | |
| Mercury | 20.2 | 3.30 | mg/kg wet | 25.50 | | 79 | 71-125 | 9 | 30 | |
| **1311 TCLP Metals** | | | | | | | | | | |
| **Batch DE40923 - 3005A_TCLP** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 0.05 | mg/L | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 0.45 | 0.05 | mg/L | 0.5000 | | 90 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 0.44 | 0.05 | mg/L | 0.5000 | | 89 | 80-120 | 2 | 20 | |
| **Batch DE41423 - 3005A_TCLP** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **1311 TCLP Metals** | | | | | | | | | | |
| **Batch DE41423 - 3005A_TCLP** | | | | | | | | | | |
| Lead | ND | 0.05 | mg/L | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 0.47 | 0.05 | mg/L | 0.5000 | | 93 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 0.46 | 0.05 | mg/L | 0.5000 | | 92 | 80-120 | 1 | 20 | |
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dioxane | ND | 0.100 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Acetone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromoform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.0100 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| Carbon Disulfide | ND | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Chloroform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromomethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methylene Chloride | ND | 0.0250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.0050 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 0.0200 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.0100 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.0050 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.0100 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0516* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0491* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0499* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0512* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0511 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,1,1-Trichloroethane | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 0.0527 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 40-160 | | | |
| 1,1,2-Trichloroethane | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| 1,1-Dichloroethane | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| 1,1-Dichloroethene | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| 1,1-Dichloropropene | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,2,3-Trichloropropane | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 0.0519 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0510 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| 1,2-Dibromoethane | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,2-Dichlorobenzene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| 1,2-Dichloroethane | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,2-Dichloropropane | 0.0500 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,3-Dichlorobenzene | 0.0496 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,3-Dichloropropane | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| 1,4-Dichlorobenzene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,4-Dioxane | 1.02 | 0.100 | mg/kg wet | 1.000 | | 102 | 70-130 | | | |
| 2,2-Dichloropropane | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 2-Butanone | 0.299 | 0.0500 | mg/kg wet | 0.2500 | | 119 | 40-160 | | | |
| 2-Chlorotoluene | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 2-Hexanone | 0.303 | 0.0500 | mg/kg wet | 0.2500 | | 121 | 40-160 | | | |
| 4-Chlorotoluene | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 4-Isopropyltoluene | 0.0480 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 0.264 | 0.0500 | mg/kg wet | 0.2500 | | 106 | 40-160 | | | |
| Acetone | 0.384 | 0.0500 | mg/kg wet | 0.2500 | | 154 | 40-160 | | | |
| Benzene | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Bromobenzene | 0.0512 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Bromochloromethane | 0.0496 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| Bromodichloromethane | 0.0580 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | | | |
| Bromoform | 0.0408 | 0.0050 | mg/kg wet | 0.05000 | | 82 | 40-160 | | | |
| Bromomethane | 0.0484 | 0.0100 | mg/kg wet | 0.05000 | | 97 | 40-160 | | | |
| Carbon Disulfide | 0.0520 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Carbon Tetrachloride | 0.0489 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Chlorobenzene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Chloroethane | 0.0488 | 0.0100 | mg/kg wet | 0.05000 | | 98 | 40-160 | | | |
| Chloroform | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Chloromethane | 0.0442 | 0.0100 | mg/kg wet | 0.05000 | | 88 | 40-160 | | | |
| cis-1,2-Dichloroethene | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| cis-1,3-Dichloropropene | 0.0529 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 40-160 | | | |
| Dibromochloromethane | 0.0493 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 40-160 | | | |
| Dibromomethane | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Dichlorodifluoromethane | 0.0301 | 0.0100 | mg/kg wet | 0.05000 | | 60 | 40-160 | | | |
| Diethyl Ether | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Di-isopropyl ether | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 0.0532 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| Ethylbenzene | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| Hexachlorobutadiene | 0.0469 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 40-160 | | | |
| Isopropylbenzene | 0.0551 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| Methyl tert-Butyl Ether | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Methylene Chloride | 0.0453 | 0.0250 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| Naphthalene | 0.0497 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 40-160 | | | |
| n-Butylbenzene | 0.0502 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| n-Propylbenzene | 0.0517 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| sec-Butylbenzene | 0.0472 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| Styrene | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 40-160 | | | |
| tert-Butylbenzene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| Tertiary-amyl methyl ether | 0.0535 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| Tetrachloroethene | 0.0457 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| Tetrahydrofuran | 0.0541 | 0.0200 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Toluene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| trans-1,2-Dichloroethene | 0.0491 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| trans-1,3-Dichloropropene | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Trichloroethene | 0.0479 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Trichlorofluoromethane | 0.0466 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 40-160 | | | |
| Vinyl Chloride | 0.0451 | 0.0100 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| Xylene O | 0.0520 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Xylene P,M | 0.104 | 0.0100 | mg/kg wet | 0.1000 | | 104 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0507* | | mg/kg wet | *0.05000* | | *101* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0499* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0502* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0511* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0489 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 4 | 20 | |
| 1,1,1-Trichloroethane | 0.0475 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 4 | 20 | |
| 1,1,2,2-Tetrachloroethane | 0.0478 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 40-160 | 10 | 20 | |
| 1,1,2-Trichloroethane | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| 1,1-Dichloroethane | 0.0462 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 5 | 20 | |
| 1,1-Dichloroethene | 0.0466 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 4 | 20 | |
| 1,1-Dichloropropene | 0.0451 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | 5 | 20 | |
| 1,2,3-Trichlorobenzene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 4 | 20 | |
| 1,2,3-Trichloropropane | 0.0432 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 70-130 | 8 | 20 | |
| 1,2,4-Trichlorobenzene | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 3 | 20 | |
| 1,2,4-Trimethylbenzene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 1 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 0.0421 | 0.0050 | mg/kg wet | 0.05000 | | 84 | 70-130 | 9 | 20 | |
| 1,2-Dibromoethane | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| 1,2-Dichlorobenzene | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 2 | 20 | |
| 1,2-Dichloroethane | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 5 | 20 | |
| 1,2-Dichloropropane | 0.0478 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 5 | 20 | |
| 1,3,5-Trimethylbenzene | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 2 | 20 | |
| 1,3-Dichlorobenzene | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 3 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| 1,3-Dichloropropane | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 5 | 20 | |
| 1,4-Dichlorobenzene | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 1 | 20 | |
| 1,4-Dioxane | 0.910 | 0.100 | mg/kg wet | 1.000 | | 91 | 70-130 | 11 | 20 | |
| 2,2-Dichloropropane | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 4 | 20 | |
| 2-Butanone | 0.267 | 0.0500 | mg/kg wet | 0.2500 | | 107 | 40-160 | 11 | 20 | |
| 2-Chlorotoluene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 0.6 | 20 | |
| 2-Hexanone | 0.267 | 0.0500 | mg/kg wet | 0.2500 | | 107 | 40-160 | 13 | 20 | |
| 4-Chlorotoluene | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| 4-Isopropyltoluene | 0.0471 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 2 | 20 | |
| 4-Methyl-2-Pentanone | 0.233 | 0.0500 | mg/kg wet | 0.2500 | | 93 | 40-160 | 12 | 20 | |
| Acetone | 0.335 | 0.0500 | mg/kg wet | 0.2500 | | 134 | 40-160 | 14 | 20 | |
| Benzene | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 5 | 20 | |
| Bromobenzene | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 1 | 20 | |
| Bromochloromethane | 0.0479 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 3 | 20 | |
| Bromodichloromethane | 0.0552 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 5 | 20 | |
| Bromoform | 0.0380 | 0.0050 | mg/kg wet | 0.05000 | | 76 | 40-160 | 7 | 20 | |
| Bromomethane | 0.0463 | 0.0100 | mg/kg wet | 0.05000 | | 93 | 40-160 | 4 | 20 | |
| Carbon Disulfide | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 4 | 20 | |
| Carbon Tetrachloride | 0.0467 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 5 | 20 | |
| Chlorobenzene | 0.0484 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 4 | 20 | |
| Chloroethane | 0.0465 | 0.0100 | mg/kg wet | 0.05000 | | 93 | 40-160 | 5 | 20 | |
| Chloroform | 0.0484 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 4 | 20 | |
| Chloromethane | 0.0423 | 0.0100 | mg/kg wet | 0.05000 | | 85 | 40-160 | 4 | 20 | |
| cis-1,2-Dichloroethene | 0.0480 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 5 | 20 | |
| cis-1,3-Dichloropropene | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 40-160 | 5 | 20 | |
| Dibromochloromethane | 0.0468 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 40-160 | 5 | 20 | |
| Dibromomethane | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| Dichlorodifluoromethane | 0.0280 | 0.0100 | mg/kg wet | 0.05000 | | 56 | 40-160 | 7 | 20 | |
| Diethyl Ether | 0.0511 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 5 | 20 | |
| Di-isopropyl ether | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 4 | 20 | |
| Ethyl tertiary-butyl ether | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 5 | 20 | |
| Ethylbenzene | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| Hexachlorobutadiene | 0.0460 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 40-160 | 2 | 20 | |
| Isopropylbenzene | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 2 | 20 | |
| Methyl tert-Butyl Ether | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| Methylene Chloride | 0.0439 | 0.0250 | mg/kg wet | 0.05000 | | 88 | 70-130 | 3 | 20 | |
| Naphthalene | 0.0473 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 40-160 | 5 | 20 | |
| n-Butylbenzene | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| n-Propylbenzene | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 2 | 20 | |
| sec-Butylbenzene | 0.0463 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 2 | 20 | |
| Styrene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 40-160 | 4 | 20 | |
| tert-Butylbenzene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 2 | 20 | |
| Tertiary-amyl methyl ether | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 6 | 20 | |
| Tetrachloroethene | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 5 | 20 | |
| Tetrahydrofuran | 0.0469 | 0.0200 | mg/kg wet | 0.05000 | | 94 | 70-130 | 14 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| Toluene | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 4 | 20 | |
| trans-1,2-Dichloroethene | 0.0464 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 6 | 20 | |
| trans-1,3-Dichloropropene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| Trichloroethene | 0.0462 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 4 | 20 | |
| Trichlorofluoromethane | 0.0445 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 40-160 | 5 | 20 | |
| Vinyl Chloride | 0.0423 | 0.0100 | mg/kg wet | 0.05000 | | 85 | 70-130 | 6 | 20 | |
| Xylene O | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 3 | 20 | |
| Xylene P,M | 0.101 | 0.0100 | mg/kg wet | 0.1000 | | 101 | 70-130 | 3 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0495* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0492* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0493* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0508* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **Batch DE40717 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dioxane | ND | 0.100 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Acetone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40717 - 5035** | | | | | | | | | | |
| Bromobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromoform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Carbon Disulfide | ND | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Chloroform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromomethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methylene Chloride | ND | 0.0250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.0050 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 0.0200 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.0100 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.0050 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.0100 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0534* | | mg/kg wet | *0.05000* | | *107* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0496* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0507* | | mg/kg wet | *0.05000* | | *101* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0515* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40717 - 5035** | | | | | | | | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0521 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| 1,1,1-Trichloroethane | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 40-160 | | | |
| 1,1,2-Trichloroethane | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| 1,1-Dichloroethane | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| 1,1-Dichloroethene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| 1,1-Dichloropropene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| 1,2,3-Trichloropropane | 0.0448 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 0.0526 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0441 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | | | |
| 1,2-Dibromoethane | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| 1,2-Dichlorobenzene | 0.0491 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| 1,2-Dichloroethane | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,2-Dichloropropane | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0521 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| 1,3-Dichlorobenzene | 0.0511 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,3-Dichloropropane | 0.0526 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| 1,4-Dichlorobenzene | 0.0493 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,4-Dioxane | 0.941 | 0.100 | mg/kg wet | 1.000 | | 94 | 70-130 | | | |
| 2,2-Dichloropropane | 0.0524 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| 2-Butanone | 0.288 | 0.0500 | mg/kg wet | 0.2500 | | 115 | 40-160 | | | |
| 2-Chlorotoluene | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 2-Hexanone | 0.285 | 0.0500 | mg/kg wet | 0.2500 | | 114 | 40-160 | | | |
| 4-Chlorotoluene | 0.0514 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 4-Isopropyltoluene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 0.246 | 0.0500 | mg/kg wet | 0.2500 | | 98 | 40-160 | | | |
| Acetone | 0.363 | 0.0500 | mg/kg wet | 0.2500 | | 145 | 40-160 | | | |
| Benzene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| Bromobenzene | 0.0511 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Bromochloromethane | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Bromodichloromethane | 0.0591 | 0.0050 | mg/kg wet | 0.05000 | | 118 | 70-130 | | | |
| Bromoform | 0.0404 | 0.0050 | mg/kg wet | 0.05000 | | 81 | 40-160 | | | |
| Bromomethane | 0.0480 | 0.0100 | mg/kg wet | 0.05000 | | 96 | 40-160 | | | |
| Carbon Disulfide | 0.0546 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | | | |
| Carbon Tetrachloride | 0.0519 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Chlorobenzene | 0.0517 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Chloroethane | 0.0509 | 0.0100 | mg/kg wet | 0.05000 | | 102 | 40-160 | | | |
| Chloroform | 0.0521 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Chloromethane | 0.0461 | 0.0100 | mg/kg wet | 0.05000 | | 92 | 40-160 | | | |
| cis-1,2-Dichloroethene | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| cis-1,3-Dichloropropene | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 40-160 | | | |
| Dibromochloromethane | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 40-160 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40717 - 5035** | | | | | | | | | | |
| Dibromomethane | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Dichlorodifluoromethane | 0.0323 | 0.0100 | mg/kg wet | 0.05000 | | 65 | 40-160 | | | |
| Diethyl Ether | 0.0532 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Di-isopropyl ether | 0.0553 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 0.0533 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| Ethylbenzene | 0.0520 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Hexachlorobutadiene | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 40-160 | | | |
| Isopropylbenzene | 0.0568 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | | | |
| Methyl tert-Butyl Ether | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Methylene Chloride | 0.0475 | 0.0250 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| Naphthalene | 0.0479 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 40-160 | | | |
| n-Butylbenzene | 0.0520 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| n-Propylbenzene | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| sec-Butylbenzene | 0.0489 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Styrene | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 40-160 | | | |
| tert-Butylbenzene | 0.0510 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Tertiary-amyl methyl ether | 0.0528 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Tetrachloroethene | 0.0439 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | | | |
| Tetrahydrofuran | 0.0505 | 0.0200 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Toluene | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| trans-1,2-Dichloroethene | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| trans-1,3-Dichloropropene | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Trichloroethene | 0.0493 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| Trichlorofluoromethane | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 40-160 | | | |
| Vinyl Chloride | 0.0470 | 0.0100 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| Xylene O | 0.0532 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Xylene P,M | 0.108 | 0.0100 | mg/kg wet | 0.1000 | | 108 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0511* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0499* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0505* | | mg/kg wet | *0.05000* | | *101* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0517* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0527 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 1 | 20 | |
| 1,1,1-Trichloroethane | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 4 | 20 | |
| 1,1,2,2-Tetrachloroethane | 0.0491 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 40-160 | 2 | 20 | |
| 1,1,2-Trichloroethane | 0.0529 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 2 | 20 | |
| 1,1-Dichloroethane | 0.0517 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 3 | 20 | |
| 1,1-Dichloroethene | 0.0522 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 4 | 20 | |
| 1,1-Dichloropropene | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 3 | 20 | |
| 1,2,3-Trichlorobenzene | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 3 | 20 | |
| 1,2,3-Trichloropropane | 0.0438 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | 2 | 20 | |
| 1,2,4-Trichlorobenzene | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 4 | 20 | |
| 1,2,4-Trimethylbenzene | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 3 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 0.0435 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 70-130 | 1 | 20 | |
| 1,2-Dibromoethane | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 3 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40717 - 5035** | | | | | | | | | | |
| 1,2-Dichlorobenzene | 0.0475 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 3 | 20 | |
| 1,2-Dichloroethane | 0.0521 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 2 | 20 | |
| 1,2-Dichloropropane | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 4 | 20 | |
| 1,3,5-Trimethylbenzene | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 3 | 20 | |
| 1,3-Dichlorobenzene | 0.0483 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| 1,3-Dichloropropane | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 2 | 20 | |
| 1,4-Dichlorobenzene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 2 | 20 | |
| 1,4-Dioxane | 1.02 | 0.100 | mg/kg wet | 1.000 | | 102 | 70-130 | 8 | 20 | |
| 2,2-Dichloropropane | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 3 | 20 | |
| 2-Butanone | 0.310 | 0.0500 | mg/kg wet | 0.2500 | | 124 | 40-160 | 7 | 20 | |
| 2-Chlorotoluene | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 2 | 20 | |
| 2-Hexanone | 0.306 | 0.0500 | mg/kg wet | 0.2500 | | 123 | 40-160 | 7 | 20 | |
| 4-Chlorotoluene | 0.0492 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 4 | 20 | |
| 4-Isopropyltoluene | 0.0481 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 3 | 20 | |
| 4-Methyl-2-Pentanone | 0.266 | 0.0500 | mg/kg wet | 0.2500 | | 106 | 40-160 | 8 | 20 | |
| Acetone | 0.399 | 0.0500 | mg/kg wet | 0.2500 | | 160 | 40-160 | 10 | 20 | |
| Benzene | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 3 | 20 | |
| Bromobenzene | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 4 | 20 | |
| Bromochloromethane | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 0.6 | 20 | |
| Bromodichloromethane | 0.0613 | 0.0050 | mg/kg wet | 0.05000 | | 123 | 70-130 | 4 | 20 | |
| Bromoform | 0.0414 | 0.0050 | mg/kg wet | 0.05000 | | 83 | 40-160 | 2 | 20 | |
| Bromomethane | 0.0502 | 0.0100 | mg/kg wet | 0.05000 | | 100 | 40-160 | 5 | 20 | |
| Carbon Disulfide | 0.0569 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | 4 | 20 | |
| Carbon Tetrachloride | 0.0532 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 2 | 20 | |
| Chlorobenzene | 0.0526 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 2 | 20 | |
| Chloroethane | 0.0526 | 0.0100 | mg/kg wet | 0.05000 | | 105 | 40-160 | 3 | 20 | |
| Chloroform | 0.0534 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 3 | 20 | |
| Chloromethane | 0.0479 | 0.0100 | mg/kg wet | 0.05000 | | 96 | 40-160 | 4 | 20 | |
| cis-1,2-Dichloroethene | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 3 | 20 | |
| cis-1,3-Dichloropropene | 0.0555 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 40-160 | 3 | 20 | |
| Dibromochloromethane | 0.0497 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 40-160 | 1 | 20 | |
| Dibromomethane | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 5 | 20 | |
| Dichlorodifluoromethane | 0.0319 | 0.0100 | mg/kg wet | 0.05000 | | 64 | 40-160 | 1 | 20 | |
| Diethyl Ether | 0.0558 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 5 | 20 | |
| Di-isopropyl ether | 0.0572 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | 3 | 20 | |
| Ethyl tertiary-butyl ether | 0.0552 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 4 | 20 | |
| Ethylbenzene | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 2 | 20 | |
| Hexachlorobutadiene | 0.0469 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 40-160 | 4 | 20 | |
| Isopropylbenzene | 0.0553 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | 3 | 20 | |
| Methyl tert-Butyl Ether | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 4 | 20 | |
| Methylene Chloride | 0.0485 | 0.0250 | mg/kg wet | 0.05000 | | 97 | 70-130 | 2 | 20 | |
| Naphthalene | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 40-160 | 1 | 20 | |
| n-Butylbenzene | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 3 | 20 | |
| n-Propylbenzene | 0.0519 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 2 | 20 | |
| sec-Butylbenzene | 0.0472 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 4 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40717 - 5035** | | | | | | | | | | |
| Styrene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 40-160 | 1 | 20 | |
| tert-Butylbenzene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 3 | 20 | |
| Tertiary-amyl methyl ether | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 4 | 20 | |
| Tetrachloroethene | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 15 | 20 | |
| Tetrahydrofuran | 0.0544 | 0.0200 | mg/kg wet | 0.05000 | | 109 | 70-130 | 7 | 20 | |
| Toluene | 0.0524 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 3 | 20 | |
| trans-1,2-Dichloroethene | 0.0525 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 3 | 20 | |
| trans-1,3-Dichloropropene | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 3 | 20 | |
| Trichloroethene | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 4 | 20 | |
| Trichlorofluoromethane | 0.0510 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 40-160 | 4 | 20 | |
| Vinyl Chloride | 0.0486 | 0.0100 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| Xylene O | 0.0545 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 2 | 20 | |
| Xylene P,M | 0.110 | 0.0100 | mg/kg wet | 0.1000 | | 110 | 70-130 | 2 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0520* | | mg/kg wet | *0.05000* | | *104* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0505* | | mg/kg wet | *0.05000* | | *101* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0509* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0510* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **Batch DE40817 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dioxane | ND | 0.100 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 0.0500 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40817 - 5035** | | | | | | | | | | |
| 4-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Acetone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromoform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Carbon Disulfide | ND | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Chloroform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromomethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methylene Chloride | ND | 0.0250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.0050 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 0.0200 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.0100 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40817 - 5035** | | | | | | | | | | |
| Xylene P,M | ND | 0.0100 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0545* | | mg/kg wet | *0.05000* | | *109* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0484* | | mg/kg wet | *0.05000* | | *97* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0513* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0509* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0514 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,1,1-Trichloroethane | 0.0525 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 40-160 | | | |
| 1,1,2-Trichloroethane | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| 1,1-Dichloroethane | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,1-Dichloroethene | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,1-Dichloropropene | 0.0510 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 0.0476 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| 1,2,3-Trichloropropane | 0.0449 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0495 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0451 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| 1,2-Dibromoethane | 0.0514 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,2-Dichlorobenzene | 0.0467 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |
| 1,2-Dichloroethane | 0.0525 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| 1,2-Dichloropropane | 0.0524 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,3-Dichlorobenzene | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| 1,3-Dichloropropane | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| 1,4-Dichlorobenzene | 0.0478 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| 1,4-Dioxane | 1.03 | 0.100 | mg/kg wet | 1.000 | | 103 | 70-130 | | | |
| 2,2-Dichloropropane | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| 2-Butanone | 0.316 | 0.0500 | mg/kg wet | 0.2500 | | 126 | 40-160 | | | |
| 2-Chlorotoluene | 0.0492 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| 2-Hexanone | 0.306 | 0.0500 | mg/kg wet | 0.2500 | | 123 | 40-160 | | | |
| 4-Chlorotoluene | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| 4-Isopropyltoluene | 0.0475 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 0.276 | 0.0500 | mg/kg wet | 0.2500 | | 110 | 40-160 | | | |
| Acetone | 0.406 | 0.0500 | mg/kg wet | 0.2500 | | 162 | 40-160 | | | B+ |
| Benzene | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Bromobenzene | 0.0484 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| Bromochloromethane | 0.0512 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Bromodichloromethane | 0.0602 | 0.0050 | mg/kg wet | 0.05000 | | 120 | 70-130 | | | |
| Bromoform | 0.0412 | 0.0050 | mg/kg wet | 0.05000 | | 82 | 40-160 | | | |
| Bromomethane | 0.0486 | 0.0100 | mg/kg wet | 0.05000 | | 97 | 40-160 | | | |
| Carbon Disulfide | 0.0559 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | | | |
| Carbon Tetrachloride | 0.0529 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Chlorobenzene | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Chloroethane | 0.0512 | 0.0100 | mg/kg wet | 0.05000 | | 102 | 40-160 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40817 - 5035** | | | | | | | | | | |
| Chloroform | 0.0532 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Chloromethane | 0.0481 | 0.0100 | mg/kg wet | 0.05000 | | 96 | 40-160 | | | |
| cis-1,2-Dichloroethene | 0.0525 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| cis-1,3-Dichloropropene | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 40-160 | | | |
| Dibromochloromethane | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 40-160 | | | |
| Dibromomethane | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Dichlorodifluoromethane | 0.0336 | 0.0100 | mg/kg wet | 0.05000 | | 67 | 40-160 | | | |
| Diethyl Ether | 0.0553 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| Di-isopropyl ether | 0.0563 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Ethylbenzene | 0.0517 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Hexachlorobutadiene | 0.0461 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 40-160 | | | |
| Isopropylbenzene | 0.0535 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| Methyl tert-Butyl Ether | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| Methylene Chloride | 0.0479 | 0.0250 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Naphthalene | 0.0465 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 40-160 | | | |
| n-Butylbenzene | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| n-Propylbenzene | 0.0510 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| sec-Butylbenzene | 0.0467 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |
| Styrene | 0.0512 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 40-160 | | | |
| tert-Butylbenzene | 0.0484 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| Tertiary-amyl methyl ether | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| Tetrachloroethene | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| Tetrahydrofuran | 0.0577 | 0.0200 | mg/kg wet | 0.05000 | | 115 | 70-130 | | | |
| Toluene | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| trans-1,2-Dichloroethene | 0.0517 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| trans-1,3-Dichloropropene | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Trichloroethene | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Trichlorofluoromethane | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 40-160 | | | |
| Vinyl Chloride | 0.0482 | 0.0100 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Xylene O | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Xylene P,M | 0.107 | 0.0100 | mg/kg wet | 0.1000 | | 107 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0532* | | mg/kg wet | *0.05000* | | *106* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0510* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0520* | | mg/kg wet | *0.05000* | | *104* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0509* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0535 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 4 | 20 | |
| 1,1,1-Trichloroethane | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 2 | 20 | |
| 1,1,2,2-Tetrachloroethane | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 40-160 | 2 | 20 | |
| 1,1,2-Trichloroethane | 0.0544 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 2 | 20 | |
| 1,1-Dichloroethane | 0.0520 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 1 | 20 | |
| 1,1-Dichloroethene | 0.0521 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 0.9 | 20 | |
| 1,1-Dichloropropene | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 0.3 | 20 | |
| 1,2,3-Trichlorobenzene | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 1 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40817 - 5035** | | | | | | | | | | |
| 1,2,3-Trichloropropane | 0.0444 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | 1 | 20 | |
| 1,2,4-Trichlorobenzene | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 4 | 20 | |
| 1,2,4-Trimethylbenzene | 0.0473 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 5 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 0.0454 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | 0.6 | 20 | |
| 1,2-Dibromoethane | 0.0534 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 4 | 20 | |
| 1,2-Dichlorobenzene | 0.0450 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | 4 | 20 | |
| 1,2-Dichloroethane | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 2 | 20 | |
| 1,2-Dichloropropane | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 3 | 20 | |
| 1,3,5-Trimethylbenzene | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 4 | 20 | |
| 1,3-Dichlorobenzene | 0.0476 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 3 | 20 | |
| 1,3-Dichloropropane | 0.0558 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 4 | 20 | |
| 1,4-Dichlorobenzene | 0.0464 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 3 | 20 | |
| 1,4-Dioxane | 1.12 | 0.100 | mg/kg wet | 1.000 | | 112 | 70-130 | 9 | 20 | |
| 2,2-Dichloropropane | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 0.04 | 20 | |
| 2-Butanone | 0.332 | 0.0500 | mg/kg wet | 0.2500 | | 133 | 40-160 | 5 | 20 | |
| 2-Chlorotoluene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 0.4 | 20 | |
| 2-Hexanone | 0.332 | 0.0500 | mg/kg wet | 0.2500 | | 133 | 40-160 | 8 | 20 | |
| 4-Chlorotoluene | 0.0466 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 4 | 20 | |
| 4-Isopropyltoluene | 0.0449 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | 6 | 20 | |
| 4-Methyl-2-Pentanone | 0.288 | 0.0500 | mg/kg wet | 0.2500 | | 115 | 40-160 | 4 | 20 | |
| Acetone | 0.435 | 0.0500 | mg/kg wet | 0.2500 | | 174 | 40-160 | 7 | 20 | B+ |
| Benzene | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 2 | 20 | |
| Bromobenzene | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 3 | 20 | |
| Bromochloromethane | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 2 | 20 | |
| Bromodichloromethane | 0.0622 | 0.0050 | mg/kg wet | 0.05000 | | 124 | 70-130 | 3 | 20 | |
| Bromoform | 0.0432 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 40-160 | 5 | 20 | |
| Bromomethane | 0.0499 | 0.0100 | mg/kg wet | 0.05000 | | 100 | 40-160 | 3 | 20 | |
| Carbon Disulfide | 0.0564 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | 1 | 20 | |
| Carbon Tetrachloride | 0.0533 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 0.8 | 20 | |
| Chlorobenzene | 0.0525 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 2 | 20 | |
| Chloroethane | 0.0514 | 0.0100 | mg/kg wet | 0.05000 | | 103 | 40-160 | 0.3 | 20 | |
| Chloroform | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 1 | 20 | |
| Chloromethane | 0.0478 | 0.0100 | mg/kg wet | 0.05000 | | 96 | 40-160 | 0.7 | 20 | |
| cis-1,2-Dichloroethene | 0.0534 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 2 | 20 | |
| cis-1,3-Dichloropropene | 0.0563 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 40-160 | 3 | 20 | |
| Dibromochloromethane | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 40-160 | 5 | 20 | |
| Dibromomethane | 0.0548 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 3 | 20 | |
| Dichlorodifluoromethane | 0.0319 | 0.0100 | mg/kg wet | 0.05000 | | 64 | 40-160 | 5 | 20 | |
| Diethyl Ether | 0.0570 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | 3 | 20 | |
| Di-isopropyl ether | 0.0580 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | 3 | 20 | |
| Ethyl tertiary-butyl ether | 0.0560 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 4 | 20 | |
| Ethylbenzene | 0.0524 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 1 | 20 | |
| Hexachlorobutadiene | 0.0443 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 40-160 | 4 | 20 | |
| Isopropylbenzene | 0.0519 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 3 | 20 | |
| Methyl tert-Butyl Ether | 0.0545 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 4 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40817 - 5035** | | | | | | | | | | |
| Methylene Chloride | 0.0484 | 0.0250 | mg/kg wet | 0.05000 | | 97 | 70-130 | 1 | 20 | |
| Naphthalene | 0.0463 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 40-160 | 0.3 | 20 | |
| n-Butylbenzene | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 6 | 20 | |
| n-Propylbenzene | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 4 | 20 | |
| sec-Butylbenzene | 0.0442 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | 5 | 20 | |
| Styrene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 40-160 | 2 | 20 | |
| tert-Butylbenzene | 0.0461 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 5 | 20 | |
| Tertiary-amyl methyl ether | 0.0562 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 5 | 20 | |
| Tetrachloroethene | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 7 | 20 | |
| Tetrahydrofuran | 0.0598 | 0.0200 | mg/kg wet | 0.05000 | | 120 | 70-130 | 4 | 20 | |
| Toluene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 2 | 20 | |
| trans-1,2-Dichloroethene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 1 | 20 | |
| trans-1,3-Dichloropropene | 0.0543 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 2 | 20 | |
| Trichloroethene | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 1 | 20 | |
| Trichlorofluoromethane | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 40-160 | 0.4 | 20 | |
| Vinyl Chloride | 0.0481 | 0.0100 | mg/kg wet | 0.05000 | | 96 | 70-130 | 0.2 | 20 | |
| Xylene O | 0.0540 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 2 | 20 | |
| Xylene P,M | 0.109 | 0.0100 | mg/kg wet | 0.1000 | | 109 | 70-130 | 2 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0538* | | mg/kg wet | *0.05000* | | *108* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0520* | | mg/kg wet | *0.05000* | | *104* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0524* | | mg/kg wet | *0.05000* | | *105* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0518* | | mg/kg wet | *0.05000* | | *104* | *70-130* | | | |
| **Batch DE40926 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40926 - 5035** | | | | | | | | | | |
| 1,4-Dioxane | ND | 0.100 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Acetone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromoform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Carbon Disulfide | ND | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Chloroform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromomethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methylene Chloride | ND | 0.0250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.0050 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 0.0200 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40926 - 5035** | | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.0100 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.0050 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.0100 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0556* | | mg/kg wet | *0.05000* | | *111* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0487* | | mg/kg wet | *0.05000* | | *97* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0525* | | mg/kg wet | *0.05000* | | *105* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0510* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| 1,1,1-Trichloroethane | 0.0546 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 0.0569 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 40-160 | | | |
| 1,1,2-Trichloroethane | 0.0567 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | | | |
| 1,1-Dichloroethane | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| 1,1-Dichloroethene | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| 1,1-Dichloropropene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| 1,2,3-Trichloropropane | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 0.0562 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,2-Dibromoethane | 0.0558 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | | | |
| 1,2-Dichlorobenzene | 0.0524 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| 1,2-Dichloroethane | 0.0556 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| 1,2-Dichloropropane | 0.0552 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0545 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | | | |
| 1,3-Dichlorobenzene | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| 1,3-Dichloropropane | 0.0578 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | | | |
| 1,4-Dichlorobenzene | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| 1,4-Dioxane | 1.11 | 0.100 | mg/kg wet | 1.000 | | 111 | 70-130 | | | |
| 2,2-Dichloropropane | 0.0554 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| 2-Butanone | 0.337 | 0.0500 | mg/kg wet | 0.2500 | | 135 | 40-160 | | | |
| 2-Chlorotoluene | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| 2-Hexanone | 0.344 | 0.0500 | mg/kg wet | 0.2500 | | 138 | 40-160 | | | |
| 4-Chlorotoluene | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| 4-Isopropyltoluene | 0.0517 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 0.295 | 0.0500 | mg/kg wet | 0.2500 | | 118 | 40-160 | | | |
| Acetone | 0.436 | 0.0500 | mg/kg wet | 0.2500 | | 174 | 40-160 | | | B+ |
| Benzene | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Bromobenzene | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Bromochloromethane | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Bromodichloromethane | 0.0639 | 0.0050 | mg/kg wet | 0.05000 | | 128 | 70-130 | | | |
| Bromoform | 0.0441 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 40-160 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40926 - 5035** | | | | | | | | | | |
| Bromomethane | 0.0505 | 0.0100 | mg/kg wet | 0.05000 | | 101 | 40-160 | | | |
| Carbon Disulfide | 0.0573 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | | | |
| Carbon Tetrachloride | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| Chlorobenzene | 0.0547 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | | | |
| Chloroethane | 0.0529 | 0.0100 | mg/kg wet | 0.05000 | | 106 | 40-160 | | | |
| Chloroform | 0.0554 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| Chloromethane | 0.0490 | 0.0100 | mg/kg wet | 0.05000 | | 98 | 40-160 | | | |
| cis-1,2-Dichloroethene | 0.0552 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| cis-1,3-Dichloropropene | 0.0582 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 40-160 | | | |
| Dibromochloromethane | 0.0534 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 40-160 | | | |
| Dibromomethane | 0.0566 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | | | |
| Dichlorodifluoromethane | 0.0335 | 0.0100 | mg/kg wet | 0.05000 | | 67 | 40-160 | | | |
| Diethyl Ether | 0.0593 | 0.0050 | mg/kg wet | 0.05000 | | 119 | 70-130 | | | |
| Di-isopropyl ether | 0.0597 | 0.0050 | mg/kg wet | 0.05000 | | 119 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 0.0579 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | | | |
| Ethylbenzene | 0.0543 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | | | |
| Hexachlorobutadiene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 40-160 | | | |
| Isopropylbenzene | 0.0585 | 0.0050 | mg/kg wet | 0.05000 | | 117 | 70-130 | | | |
| Methyl tert-Butyl Ether | 0.0563 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | | | |
| Methylene Chloride | 0.0504 | 0.0250 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Naphthalene | 0.0526 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 40-160 | | | |
| n-Butylbenzene | 0.0541 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| n-Propylbenzene | 0.0556 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| sec-Butylbenzene | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Styrene | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 40-160 | | | |
| tert-Butylbenzene | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Tertiary-amyl methyl ether | 0.0577 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | | | |
| Tetrachloroethene | 0.0454 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| Tetrahydrofuran | 0.0604 | 0.0200 | mg/kg wet | 0.05000 | | 121 | 70-130 | | | |
| Toluene | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| trans-1,2-Dichloroethene | 0.0533 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| trans-1,3-Dichloropropene | 0.0567 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | | | |
| Trichloroethene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| Trichlorofluoromethane | 0.0519 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 40-160 | | | |
| Vinyl Chloride | 0.0489 | 0.0100 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Xylene O | 0.0568 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | | | |
| Xylene P,M | 0.114 | 0.0100 | mg/kg wet | 0.1000 | | 114 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0548* | | mg/kg wet | *0.05000* | | *110* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0510* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0533* | | mg/kg wet | *0.05000* | | *107* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0526* | | mg/kg wet | *0.05000* | | *105* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 0 | 20 | |
| 1,1,1-Trichloroethane | 0.0544 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 0.5 | 20 | |
| 1,1,2,2-Tetrachloroethane | 0.0495 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 40-160 | 14 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40926 - 5035** | | | | | | | | | | |
| 1,1,2-Trichloroethane | 0.0556 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | 2 | 20 | |
| 1,1-Dichloroethane | 0.0532 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 0.1 | 20 | |
| 1,1-Dichloroethene | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 0.08 | 20 | |
| 1,1-Dichloropropene | 0.0522 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 0.1 | 20 | |
| 1,2,3-Trichlorobenzene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 10 | 20 | |
| 1,2,3-Trichloropropane | 0.0443 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | 13 | 20 | |
| 1,2,4-Trichlorobenzene | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 12 | 20 | |
| 1,2,4-Trimethylbenzene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 10 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 0.0440 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | 15 | 20 | |
| 1,2-Dibromoethane | 0.0532 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 5 | 20 | |
| 1,2-Dichlorobenzene | 0.0471 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 11 | 20 | |
| 1,2-Dichloroethane | 0.0548 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 1 | 20 | |
| 1,2-Dichloropropane | 0.0550 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 0.4 | 20 | |
| 1,3,5-Trimethylbenzene | 0.0496 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 9 | 20 | |
| 1,3-Dichlorobenzene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 11 | 20 | |
| 1,3-Dichloropropane | 0.0562 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 3 | 20 | |
| 1,4-Dichlorobenzene | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 11 | 20 | |
| 1,4-Dioxane | 1.02 | 0.100 | mg/kg wet | 1.000 | | 102 | 70-130 | 8 | 20 | |
| 2,2-Dichloropropane | 0.0550 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 0.7 | 20 | |
| 2-Butanone | 0.320 | 0.0500 | mg/kg wet | 0.2500 | | 128 | 40-160 | 5 | 20 | |
| 2-Chlorotoluene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 9 | 20 | |
| 2-Hexanone | 0.319 | 0.0500 | mg/kg wet | 0.2500 | | 127 | 40-160 | 8 | 20 | |
| 4-Chlorotoluene | 0.0489 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 9 | 20 | |
| 4-Isopropyltoluene | 0.0472 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 9 | 20 | |
| 4-Methyl-2-Pentanone | 0.275 | 0.0500 | mg/kg wet | 0.2500 | | 110 | 40-160 | 7 | 20 | |
| Acetone | 0.413 | 0.0500 | mg/kg wet | 0.2500 | | 165 | 40-160 | 6 | 20 | B+ |
| Benzene | 0.0524 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 1 | 20 | |
| Bromobenzene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 9 | 20 | |
| Bromochloromethane | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 0.04 | 20 | |
| Bromodichloromethane | 0.0632 | 0.0050 | mg/kg wet | 0.05000 | | 126 | 70-130 | 1 | 20 | |
| Bromoform | 0.0427 | 0.0050 | mg/kg wet | 0.05000 | | 85 | 40-160 | 3 | 20 | |
| Bromomethane | 0.0496 | 0.0100 | mg/kg wet | 0.05000 | | 99 | 40-160 | 2 | 20 | |
| Carbon Disulfide | 0.0569 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | 0.7 | 20 | |
| Carbon Tetrachloride | 0.0546 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 0.6 | 20 | |
| Chlorobenzene | 0.0533 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 3 | 20 | |
| Chloroethane | 0.0519 | 0.0100 | mg/kg wet | 0.05000 | | 104 | 40-160 | 2 | 20 | |
| Chloroform | 0.0552 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 0.3 | 20 | |
| Chloromethane | 0.0478 | 0.0100 | mg/kg wet | 0.05000 | | 96 | 40-160 | 2 | 20 | |
| cis-1,2-Dichloroethene | 0.0546 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 1 | 20 | |
| cis-1,3-Dichloropropene | 0.0576 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 40-160 | 1 | 20 | |
| Dibromochloromethane | 0.0521 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 40-160 | 2 | 20 | |
| Dibromomethane | 0.0551 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 3 | 20 | |
| Dichlorodifluoromethane | 0.0316 | 0.0100 | mg/kg wet | 0.05000 | | 63 | 40-160 | 6 | 20 | |
| Diethyl Ether | 0.0579 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | 2 | 20 | |
| Di-isopropyl ether | 0.0593 | 0.0050 | mg/kg wet | 0.05000 | | 119 | 70-130 | 0.6 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40926 - 5035** | | | | | | | | | | |
| Ethyl tertiary-butyl ether | 0.0576 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | 0.6 | 20 | |
| Ethylbenzene | 0.0538 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 1 | 20 | |
| Hexachlorobutadiene | 0.0459 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 40-160 | 9 | 20 | |
| Isopropylbenzene | 0.0544 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 7 | 20 | |
| Methyl tert-Butyl Ether | 0.0552 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 2 | 20 | |
| Methylene Chloride | 0.0498 | 0.0250 | mg/kg wet | 0.05000 | | 100 | 70-130 | 1 | 20 | |
| Naphthalene | 0.0467 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 40-160 | 12 | 20 | |
| n-Butylbenzene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 9 | 20 | |
| n-Propylbenzene | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 9 | 20 | |
| sec-Butylbenzene | 0.0465 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 9 | 20 | |
| Styrene | 0.0533 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 40-160 | 3 | 20 | |
| tert-Butylbenzene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 9 | 20 | |
| Tertiary-amyl methyl ether | 0.0574 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | 0.6 | 20 | |
| Tetrachloroethene | 0.0497 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 9 | 20 | |
| Tetrahydrofuran | 0.0565 | 0.0200 | mg/kg wet | 0.05000 | | 113 | 70-130 | 7 | 20 | |
| Toluene | 0.0534 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 0.9 | 20 | |
| trans-1,2-Dichloroethene | 0.0534 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 0.1 | 20 | |
| trans-1,3-Dichloropropene | 0.0562 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 0.9 | 20 | |
| Trichloroethene | 0.0522 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 0.3 | 20 | |
| Trichlorofluoromethane | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 40-160 | 1 | 20 | |
| Vinyl Chloride | 0.0480 | 0.0100 | mg/kg wet | 0.05000 | | 96 | 70-130 | 2 | 20 | |
| Xylene O | 0.0550 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 3 | 20 | |
| Xylene P,M | 0.111 | 0.0100 | mg/kg wet | 0.1000 | | 111 | 70-130 | 2 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0544* | | mg/kg wet | *0.05000* | | *109* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0514* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0534* | | mg/kg wet | *0.05000* | | *107* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0514* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40356 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40356 - 3546** | | | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40356 - 3546** | | | | | | | | | | |
| Pyridine | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.76* | | mg/kg wet | *2.500* | | *111* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.80* | | mg/kg wet | *3.750* | | *128* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *4.31* | | mg/kg wet | *3.750* | | *115* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.98* | | mg/kg wet | *2.500* | | *119* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *4.45* | | mg/kg wet | *3.750* | | *119* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.98* | | mg/kg wet | *2.500* | | *119* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *4.35* | | mg/kg wet | *3.750* | | *116* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *3.72* | | mg/kg wet | *2.500* | | *149* | *30-130* | | | S+ |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.56 | 0.025 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| 1,2-Dichlorobenzene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| 1,3-Dichlorobenzene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 30-130 | | | |
| 2,4-Dichlorophenol | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 30-130 | | | |
| 2,4-Dimethylphenol | 3.87 | 0.250 | mg/kg wet | 2.500 | | 155 | 30-130 | | | B+ |
| 2,4-Dinitrophenol | 1.60 | 1.00 | mg/kg wet | 2.500 | | 64 | 15-140 | | | |
| 2,4-Dinitrotoluene | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| 2-Chloronaphthalene | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | | | |
| 2-Chlorophenol | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 30-130 | | | |
| 2-Methylnaphthalene | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| 2-Methylphenol | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 15-140 | | | |
| 2-Nitrophenol | 2.24 | 0.500 | mg/kg wet | 2.500 | | 89 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.74 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | | | |
| 3+4-Methylphenol | 4.92 | 0.250 | mg/kg wet | 5.000 | | 98 | 15-140 | | | |
| 4-Bromophenyl-phenylether | 2.91 | 0.250 | mg/kg wet | 2.500 | | 116 | 40-140 | | | |
| 4-Chloroaniline | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 15-140 | | | |
| 4-Nitrophenol | 2.13 | 1.00 | mg/kg wet | 2.500 | | 85 | 15-140 | | | |
| Acenaphthene | 2.59 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | | | |
| Acenaphthylene | 2.66 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| Acetophenone | 2.26 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Aniline | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Anthracene | 2.69 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | | | |
| Azobenzene | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | | | |
| Benzo(a)anthracene | 2.76 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | | | |
| Benzo(a)pyrene | 2.81 | 0.250 | mg/kg wet | 2.500 | | 112 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.65 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.96 | 0.250 | mg/kg wet | 2.500 | | 118 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40356 - 3546** | | | | | | | | | | |
| bis(2-chloroisopropyl)Ether | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | | | |
| Butylbenzylphthalate | 2.80 | 0.250 | mg/kg wet | 2.500 | | 112 | 40-140 | | | |
| Chrysene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 3.01 | 0.250 | mg/kg wet | 2.500 | | 120 | 40-140 | | | |
| Dibenzofuran | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Diethylphthalate | 2.61 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Dimethylphthalate | 2.65 | 0.250 | mg/kg wet | 2.500 | | 106 | 15-140 | | | |
| Di-n-butylphthalate | 2.77 | 0.250 | mg/kg wet | 2.500 | | 111 | 40-140 | | | |
| Di-n-octylphthalate | 2.80 | 0.500 | mg/kg wet | 2.500 | | 112 | 40-140 | | | |
| Fluoranthene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Fluorene | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| Hexachlorobenzene | 2.75 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | | | |
| Hexachlorobutadiene | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| Hexachloroethane | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.98 | 0.250 | mg/kg wet | 2.500 | | 119 | 40-140 | | | |
| Isophorone | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Naphthalene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Nitrobenzene | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| N-Nitrosodimethylamine | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Pentachlorophenol | 2.24 | 1.00 | mg/kg wet | 2.500 | | 90 | 15-140 | | | |
| Phenanthrene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Phenol | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 15-140 | | | |
| Pyrene | 2.95 | 0.250 | mg/kg wet | 2.500 | | 118 | 40-140 | | | |
| Pyridine | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.82* | | mg/kg wet | *2.500* | | *113* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *5.30* | | mg/kg wet | *3.750* | | *141* | *30-130* | | | S+ |
| *Surrogate: 2-Chlorophenol-d4* | *4.44* | | mg/kg wet | *3.750* | | *118* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *3.13* | | mg/kg wet | *2.500* | | *125* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *4.56* | | mg/kg wet | *3.750* | | *122* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.78* | | mg/kg wet | *2.500* | | *111* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *4.43* | | mg/kg wet | *3.750* | | *118* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *3.60* | | mg/kg wet | *2.500* | | *144* | *30-130* | | | S+ |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.57 | 0.025 | mg/kg wet | 2.500 | | 103 | 40-140 | 0.6 | 30 | |
| 1,2,4-Trichlorobenzene | 2.29 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 3 | 30 | |
| 1,2-Dichlorobenzene | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 0.5 | 30 | |
| 1,3-Dichlorobenzene | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 1 | 30 | |
| 1,4-Dichlorobenzene | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 0.4 | 30 | |
| 2,4,5-Trichlorophenol | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 30-130 | 3 | 30 | |
| 2,4,6-Trichlorophenol | 2.69 | 0.250 | mg/kg wet | 2.500 | | 108 | 30-130 | 0.9 | 30 | |
| 2,4-Dichlorophenol | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 30-130 | 4 | 30 | |
| 2,4-Dimethylphenol | 3.99 | 0.250 | mg/kg wet | 2.500 | | 160 | 30-130 | 3 | 30 | B+ |
| 2,4-Dinitrophenol | 1.66 | 1.00 | mg/kg wet | 2.500 | | 66 | 15-140 | 4 | 30 | |
| 2,4-Dinitrotoluene | 2.75 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | 5 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40356 - 3546** | | | | | | | | | | |
| 2,6-Dinitrotoluene | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 4 | 30 | |
| 2-Chloronaphthalene | 2.72 | 0.250 | mg/kg wet | 2.500 | | 109 | 40-140 | 2 | 30 | |
| 2-Chlorophenol | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 30-130 | 3 | 30 | |
| 2-Methylnaphthalene | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 3 | 30 | |
| 2-Methylphenol | 2.60 | 0.250 | mg/kg wet | 2.500 | | 104 | 15-140 | 2 | 30 | |
| 2-Nitrophenol | 2.28 | 0.500 | mg/kg wet | 2.500 | | 91 | 30-130 | 2 | 30 | |
| 3,3´-Dichlorobenzidine | 2.79 | 0.250 | mg/kg wet | 2.500 | | 112 | 40-140 | 2 | 30 | |
| 3+4-Methylphenol | 5.09 | 0.250 | mg/kg wet | 5.000 | | 102 | 15-140 | 4 | 30 | |
| 4-Bromophenyl-phenylether | 2.99 | 0.250 | mg/kg wet | 2.500 | | 119 | 40-140 | 3 | 30 | |
| 4-Chloroaniline | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 15-140 | 4 | 30 | |
| 4-Nitrophenol | 2.30 | 1.00 | mg/kg wet | 2.500 | | 92 | 15-140 | 8 | 30 | |
| Acenaphthene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 2 | 30 | |
| Acenaphthylene | 2.72 | 0.250 | mg/kg wet | 2.500 | | 109 | 40-140 | 2 | 30 | |
| Acetophenone | 2.36 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 4 | 30 | |
| Aniline | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 3 | 30 | |
| Anthracene | 2.78 | 0.250 | mg/kg wet | 2.500 | | 111 | 40-140 | 4 | 30 | |
| Azobenzene | 2.73 | 0.250 | mg/kg wet | 2.500 | | 109 | 40-140 | 2 | 30 | |
| Benzo(a)anthracene | 2.83 | 0.250 | mg/kg wet | 2.500 | | 113 | 40-140 | 3 | 30 | |
| Benzo(a)pyrene | 2.87 | 0.250 | mg/kg wet | 2.500 | | 115 | 40-140 | 2 | 30 | |
| Benzo(b)fluoranthene | 2.70 | 0.250 | mg/kg wet | 2.500 | | 108 | 40-140 | 2 | 30 | |
| Benzo(g,h,i)perylene | 2.95 | 0.250 | mg/kg wet | 2.500 | | 118 | 40-140 | 0.2 | 30 | |
| Benzo(k)fluoranthene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 3 | 30 | |
| bis(2-Chloroethoxy)methane | 2.26 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 2 | 30 | |
| bis(2-Chloroethyl)ether | 2.36 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 2 | 30 | |
| bis(2-chloroisopropyl)Ether | 2.16 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 2 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.89 | 0.250 | mg/kg wet | 2.500 | | 115 | 40-140 | 7 | 30 | |
| Butylbenzylphthalate | 3.04 | 0.250 | mg/kg wet | 2.500 | | 122 | 40-140 | 8 | 30 | |
| Chrysene | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 2 | 30 | |
| Dibenzo(a,h)Anthracene | 3.11 | 0.250 | mg/kg wet | 2.500 | | 125 | 40-140 | 3 | 30 | |
| Dibenzofuran | 2.59 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 5 | 30 | |
| Diethylphthalate | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 3 | 30 | |
| Dimethylphthalate | 2.71 | 0.250 | mg/kg wet | 2.500 | | 108 | 15-140 | 2 | 30 | |
| Di-n-butylphthalate | 2.87 | 0.250 | mg/kg wet | 2.500 | | 115 | 40-140 | 4 | 30 | |
| Di-n-octylphthalate | 2.99 | 0.500 | mg/kg wet | 2.500 | | 120 | 40-140 | 7 | 30 | |
| Fluoranthene | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 2 | 30 | |
| Fluorene | 2.64 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 3 | 30 | |
| Hexachlorobenzene | 2.81 | 0.250 | mg/kg wet | 2.500 | | 112 | 40-140 | 2 | 30 | |
| Hexachlorobutadiene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 1 | 30 | |
| Hexachloroethane | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 1 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.99 | 0.250 | mg/kg wet | 2.500 | | 120 | 40-140 | 0.2 | 30 | |
| Isophorone | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 2 | 30 | |
| Naphthalene | 2.19 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 0.7 | 30 | |
| Nitrobenzene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 0.9 | 30 | |
| N-Nitrosodimethylamine | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 0.2 | 30 | |
| Pentachlorophenol | 2.28 | 1.00 | mg/kg wet | 2.500 | | 91 | 15-140 | 2 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40356 - 3546** | | | | | | | | | | |
| Phenanthrene | 2.61 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | 3 | 30 | |
| Phenol | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 15-140 | 4 | 30 | |
| Pyrene | 3.16 | 0.250 | mg/kg wet | 2.500 | | 126 | 40-140 | 7 | 30 | |
| Pyridine | 2.58 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 3 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.80* | | mg/kg wet | *2.500* | | *112* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *5.23* | | mg/kg wet | *3.750* | | *140* | *30-130* | | | S+ |
| *Surrogate: 2-Chlorophenol-d4* | *4.45* | | mg/kg wet | *3.750* | | *119* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *3.07* | | mg/kg wet | *2.500* | | *123* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *4.56* | | mg/kg wet | *3.750* | | *121* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.76* | | mg/kg wet | *2.500* | | *110* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *4.47* | | mg/kg wet | *3.750* | | *119* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *3.84* | | mg/kg wet | *2.500* | | *153* | *30-130* | | | S+ |
| **Batch DE40705 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40705 - 3546** | | | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyridine | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.27* | | mg/kg wet | *2.500* | | *91* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.38* | | mg/kg wet | *3.750* | | *117* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.21* | | mg/kg wet | *3.750* | | *86* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.29* | | mg/kg wet | *2.500* | | *92* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.19* | | mg/kg wet | *3.750* | | *85* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.24* | | mg/kg wet | *2.500* | | *89* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.16* | | mg/kg wet | *3.750* | | *84* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.61* | | mg/kg wet | *2.500* | | *104* | *30-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 1.96 | 0.025 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 1.94 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| 1,2-Dichlorobenzene | 1.88 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| 1,3-Dichlorobenzene | 1.91 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| 1,4-Dichlorobenzene | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.36 | 0.250 | mg/kg wet | 2.500 | | 94 | 30-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40705 - 3546** | | | | | | | | | | |
| 2,4,6-Trichlorophenol | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 30-130 | | | |
| 2,4-Dichlorophenol | 1.93 | 0.250 | mg/kg wet | 2.500 | | 77 | 30-130 | | | |
| 2,4-Dimethylphenol | 2.85 | 0.250 | mg/kg wet | 2.500 | | 114 | 30-130 | | | |
| 2,4-Dinitrophenol | 1.94 | 1.00 | mg/kg wet | 2.500 | | 78 | 15-140 | | | |
| 2,4-Dinitrotoluene | 2.50 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| 2-Chloronaphthalene | 2.06 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| 2-Chlorophenol | 1.87 | 0.250 | mg/kg wet | 2.500 | | 75 | 30-130 | | | |
| 2-Methylnaphthalene | 1.88 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| 2-Methylphenol | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 15-140 | | | |
| 2-Nitrophenol | 1.94 | 0.500 | mg/kg wet | 2.500 | | 78 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| 3+4-Methylphenol | 3.95 | 0.250 | mg/kg wet | 5.000 | | 79 | 15-140 | | | |
| 4-Bromophenyl-phenylether | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| 4-Chloroaniline | 1.89 | 0.250 | mg/kg wet | 2.500 | | 76 | 15-140 | | | |
| 4-Nitrophenol | 2.08 | 1.00 | mg/kg wet | 2.500 | | 83 | 15-140 | | | |
| Acenaphthene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Acenaphthylene | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Acetophenone | 1.84 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| Aniline | 1.74 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | | | |
| Anthracene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Azobenzene | 1.82 | 0.250 | mg/kg wet | 2.500 | | 73 | 40-140 | | | |
| Benzo(a)anthracene | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Benzo(a)pyrene | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.16 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 1.60 | 0.250 | mg/kg wet | 2.500 | | 64 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 1.59 | 0.250 | mg/kg wet | 2.500 | | 64 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.59 | 0.250 | mg/kg wet | 2.500 | | 64 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Butylbenzylphthalate | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Chrysene | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Dibenzofuran | 2.14 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Diethylphthalate | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Dimethylphthalate | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 15-140 | | | |
| Di-n-butylphthalate | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Di-n-octylphthalate | 2.08 | 0.500 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Fluoranthene | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| Fluorene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Hexachlorobenzene | 2.58 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | | | |
| Hexachlorobutadiene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Hexachloroethane | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40705 - 3546** | | | | | | | | | | |
| Isophorone | 1.62 | 0.250 | mg/kg wet | 2.500 | | 65 | 40-140 | | | |
| Naphthalene | 1.70 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | | | |
| Nitrobenzene | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| N-Nitrosodimethylamine | 1.79 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Pentachlorophenol | 1.99 | 1.00 | mg/kg wet | 2.500 | | 80 | 15-140 | | | |
| Phenanthrene | 2.16 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Phenol | 1.77 | 0.250 | mg/kg wet | 2.500 | | 71 | 15-140 | | | |
| Pyrene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Pyridine | 1.72 | 0.250 | mg/kg wet | 2.500 | | 69 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.08* | | mg/kg wet | *2.500* | | *83* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.26* | | mg/kg wet | *3.750* | | *114* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.06* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.25* | | mg/kg wet | *2.500* | | *90* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.94* | | mg/kg wet | *3.750* | | *78* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.89* | | mg/kg wet | *2.500* | | *76* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *2.89* | | mg/kg wet | *3.750* | | *77* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.58* | | mg/kg wet | *2.500* | | *103* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.08 | 0.025 | mg/kg wet | 2.500 | | 83 | 40-140 | 6 | 30 | |
| 1,2,4-Trichlorobenzene | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 8 | 30 | |
| 1,2-Dichlorobenzene | 1.99 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | 6 | 30 | |
| 1,3-Dichlorobenzene | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 8 | 30 | |
| 1,4-Dichlorobenzene | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 8 | 30 | |
| 2,4,5-Trichlorophenol | 2.56 | 0.250 | mg/kg wet | 2.500 | | 103 | 30-130 | 8 | 30 | |
| 2,4,6-Trichlorophenol | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 30-130 | 6 | 30 | |
| 2,4-Dichlorophenol | 2.02 | 0.250 | mg/kg wet | 2.500 | | 81 | 30-130 | 4 | 30 | |
| 2,4-Dimethylphenol | 3.28 | 0.250 | mg/kg wet | 2.500 | | 131 | 30-130 | 14 | 30 | B+ |
| 2,4-Dinitrophenol | 2.09 | 1.00 | mg/kg wet | 2.500 | | 84 | 15-140 | 7 | 30 | |
| 2,4-Dinitrotoluene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 5 | 30 | |
| 2,6-Dinitrotoluene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 2 | 30 | |
| 2-Chloronaphthalene | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 3 | 30 | |
| 2-Chlorophenol | 1.96 | 0.250 | mg/kg wet | 2.500 | | 79 | 30-130 | 5 | 30 | |
| 2-Methylnaphthalene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 6 | 30 | |
| 2-Methylphenol | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 15-140 | 6 | 30 | |
| 2-Nitrophenol | 2.06 | 0.500 | mg/kg wet | 2.500 | | 83 | 30-130 | 6 | 30 | |
| 3,3´-Dichlorobenzidine | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 3 | 30 | |
| 3+4-Methylphenol | 4.26 | 0.250 | mg/kg wet | 5.000 | | 85 | 15-140 | 7 | 30 | |
| 4-Bromophenyl-phenylether | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 4 | 30 | |
| 4-Chloroaniline | 2.06 | 0.250 | mg/kg wet | 2.500 | | 83 | 15-140 | 9 | 30 | |
| 4-Nitrophenol | 2.18 | 1.00 | mg/kg wet | 2.500 | | 87 | 15-140 | 4 | 30 | |
| Acenaphthene | 2.16 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 3 | 30 | |
| Acenaphthylene | 2.16 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 2 | 30 | |
| Acetophenone | 1.93 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | 5 | 30 | |
| Aniline | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | 12 | 30 | |
| Anthracene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 4 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40705 - 3546** | | | | | | | | | | |
| Azobenzene | 1.88 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | 3 | 30 | |
| Benzo(a)anthracene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 2 | 30 | |
| Benzo(a)pyrene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 4 | 30 | |
| Benzo(b)fluoranthene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 4 | 30 | |
| Benzo(g,h,i)perylene | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 2 | 30 | |
| Benzo(k)fluoranthene | 2.31 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 5 | 30 | |
| bis(2-Chloroethoxy)methane | 1.72 | 0.250 | mg/kg wet | 2.500 | | 69 | 40-140 | 8 | 30 | |
| bis(2-Chloroethyl)ether | 1.70 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | 6 | 30 | |
| bis(2-chloroisopropyl)Ether | 1.74 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | 9 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 4 | 30 | |
| Butylbenzylphthalate | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 5 | 30 | |
| Chrysene | 2.34 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 3 | 30 | |
| Dibenzo(a,h)Anthracene | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 3 | 30 | |
| Dibenzofuran | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 3 | 30 | |
| Diethylphthalate | 2.36 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 3 | 30 | |
| Dimethylphthalate | 2.31 | 0.250 | mg/kg wet | 2.500 | | 93 | 15-140 | 2 | 30 | |
| Di-n-butylphthalate | 2.36 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 4 | 30 | |
| Di-n-octylphthalate | 2.23 | 0.500 | mg/kg wet | 2.500 | | 89 | 40-140 | 7 | 30 | |
| Fluoranthene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 3 | 30 | |
| Fluorene | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 3 | 30 | |
| Hexachlorobenzene | 2.66 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 3 | 30 | |
| Hexachlorobutadiene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 8 | 30 | |
| Hexachloroethane | 2.02 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | 3 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.34 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 4 | 30 | |
| Isophorone | 1.76 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | 8 | 30 | |
| Naphthalene | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 40-140 | 8 | 30 | |
| Nitrobenzene | 1.88 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | 6 | 30 | |
| N-Nitrosodimethylamine | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | 7 | 30 | |
| Pentachlorophenol | 2.10 | 1.00 | mg/kg wet | 2.500 | | 84 | 15-140 | 5 | 30 | |
| Phenanthrene | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 4 | 30 | |
| Phenol | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 15-140 | 8 | 30 | |
| Pyrene | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 4 | 30 | |
| Pyridine | 1.84 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | 7 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.19* | | mg/kg wet | *2.500* | | *87* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.21* | | mg/kg wet | *3.750* | | *112* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.17* | | mg/kg wet | *3.750* | | *85* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.27* | | mg/kg wet | *2.500* | | *91* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.05* | | mg/kg wet | *3.750* | | *81* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.96* | | mg/kg wet | *2.500* | | *78* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.06* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.61* | | mg/kg wet | *2.500* | | *104* | *30-130* | | | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE41008 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE41008 - 3540C** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0211* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0204* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0178* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0189* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 80 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0205* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0196* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0184* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0186* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | 9 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | 9 | 30 | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 93 | 40-140 | 11 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 96 | 40-140 | 13 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0229* | | mg/kg wet | *0.02500* | | *92* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0222* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| **Batch DE41057 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE41057 - 3540C** | | | | | | | | | | |
| Aroclor 1221 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0172* | | mg/kg wet | *0.02500* | | *69* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0164* | | mg/kg wet | *0.02500* | | *66* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0156* | | mg/kg wet | *0.02500* | | *62* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0165* | | mg/kg wet | *0.02500* | | *66* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 63 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 63 | 40-140 | | | |
| Aroclor 1260 | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 64 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 64 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0160* | | mg/kg wet | *0.02500* | | *64* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0154* | | mg/kg wet | *0.02500* | | *61* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0150* | | mg/kg wet | *0.02500* | | *60* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0148* | | mg/kg wet | *0.02500* | | *59* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 75 | 40-140 | 17 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 74 | 40-140 | 16 | 30 | |
| Aroclor 1260 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 78 | 40-140 | 20 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 75 | 40-140 | 16 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0189* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0180* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0178* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| **Batch DE41504 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE41504 - 3540C** | | | | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0184* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0155* | | mg/kg wet | *0.02500* | | *62* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0176* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0182* | | mg/kg wet | *0.02500* | | *73* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 99 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 92 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 100 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 97 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0226* | | mg/kg wet | *0.02500* | | *90* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0204* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0209* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0206* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 16 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 70 | 40-140 | 27 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 73 | 40-140 | 31 | 30 | D+ |
| Aroclor 1260 [2C] | 0.3 | 0.05 | mg/kg wet | 0.5000 | | 68 | 40-140 | 35 | 30 | D+ |
| *Surrogate: Decachlorobiphenyl* | *0.0174* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0145* | | mg/kg wet | *0.02500* | | *58* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0179* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0171* | | mg/kg wet | *0.02500* | | *68* | *30-150* | | | |
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40622 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 4,4´-DDD | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDD [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT | ND | 0.0025 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40622 - 3546** | | | | | | | | | | |
| 4,4´-DDT [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Chlordane (Total) | ND | 0.0200 | mg/kg wet | | | | | | | |
| Chlordane (Total) [2C] | ND | 0.0200 | mg/kg wet | | | | | | | |
| delta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| delta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) [2C] | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Toxaphene | ND | 0.125 | mg/kg wet | | | | | | | |
| Toxaphene [2C] | ND | 0.125 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0146* | | mg/kg wet | *0.01250* | | *117* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0146* | | mg/kg wet | *0.01250* | | *117* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0127* | | mg/kg wet | *0.01250* | | *102* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0132* | | mg/kg wet | *0.01250* | | *105* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 4,4´-DDD | 0.0166 | 0.0025 | mg/kg wet | 0.01250 | | 133 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40622 - 3546** | | | | | | | | | | |
| 4,4´-DDD [2C] | 0.0172 | 0.0025 | mg/kg wet | 0.01250 | | 138 | 40-140 | | | |
| 4,4´-DDE | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | | | |
| 4,4´-DDE [2C] | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | | | |
| 4,4´-DDT | 0.0154 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | | | |
| 4,4´-DDT [2C] | 0.0156 | 0.0025 | mg/kg wet | 0.01250 | | 125 | 40-140 | | | |
| Aldrin | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Aldrin [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| alpha-BHC | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| alpha-BHC [2C] | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | | | |
| alpha-Chlordane | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| alpha-Chlordane [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| beta-BHC | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| beta-BHC [2C] | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| delta-BHC | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| delta-BHC [2C] | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | | | |
| Dieldrin | 0.0151 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | | | |
| Dieldrin [2C] | 0.0157 | 0.0025 | mg/kg wet | 0.01250 | | 126 | 40-140 | | | |
| Endosulfan I | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Endosulfan I [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| Endosulfan II | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | | | |
| Endosulfan II [2C] | 0.0154 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | | | |
| Endosulfan Sulfate | 0.0155 | 0.0025 | mg/kg wet | 0.01250 | | 124 | 40-140 | | | |
| Endosulfan Sulfate [2C] | 0.0158 | 0.0025 | mg/kg wet | 0.01250 | | 126 | 40-140 | | | |
| Endrin | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | | | |
| Endrin [2C] | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | | | |
| Endrin Ketone | 0.0166 | 0.0025 | mg/kg wet | 0.01250 | | 133 | 40-140 | | | |
| Endrin Ketone [2C] | 0.0166 | 0.0025 | mg/kg wet | 0.01250 | | 132 | 40-140 | | | |
| gamma-BHC (Lindane) | 0.0140 | 0.0015 | mg/kg wet | 0.01250 | | 112 | 40-140 | | | |
| gamma-BHC (Lindane) [2C] | 0.0143 | 0.0015 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| gamma-Chlordane | 0.0156 | 0.0025 | mg/kg wet | 0.01250 | | 125 | 40-140 | | | |
| gamma-Chlordane [2C] | 0.0160 | 0.0025 | mg/kg wet | 0.01250 | | 128 | 40-140 | | | |
| Heptachlor | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| Heptachlor [2C] | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Heptachlor Epoxide | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |
| Heptachlor Epoxide [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| Hexachlorobenzene | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | | | |
| Hexachlorobenzene [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Methoxychlor | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | | | |
| Methoxychlor [2C] | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0150* | | mg/kg wet | *0.01250* | | *120* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0150* | | mg/kg wet | *0.01250* | | *120* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0129* | | mg/kg wet | *0.01250* | | *103* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0132* | | mg/kg wet | *0.01250* | | *106* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 4,4´-DDD | 0.0159 | 0.0025 | mg/kg wet | 0.01250 | | 128 | 40-140 | 4 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40622 - 3546** | | | | | | | | | | |
| 4,4´-DDD [2C] | 0.0166 | 0.0025 | mg/kg wet | 0.01250 | | 133 | 40-140 | 4 | 30 | |
| 4,4´-DDE | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 3 | 30 | |
| 4,4´-DDE [2C] | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 2 | 30 | |
| 4,4´-DDT | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 3 | 30 | |
| 4,4´-DDT [2C] | 0.0151 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | 3 | 30 | |
| Aldrin | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 1 | 30 | |
| Aldrin [2C] | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 1 | 30 | |
| alpha-BHC | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 1 | 30 | |
| alpha-BHC [2C] | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 1 | 30 | |
| alpha-Chlordane | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 3 | 30 | |
| alpha-Chlordane [2C] | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | 2 | 30 | |
| beta-BHC | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | 2 | 30 | |
| beta-BHC [2C] | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 2 | 30 | |
| delta-BHC | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 3 | 30 | |
| delta-BHC [2C] | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 3 | 30 | |
| Dieldrin | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 3 | 30 | |
| Dieldrin [2C] | 0.0153 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | 3 | 30 | |
| Endosulfan I | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | 3 | 30 | |
| Endosulfan I [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 2 | 30 | |
| Endosulfan II | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 3 | 30 | |
| Endosulfan II [2C] | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 3 | 30 | |
| Endosulfan Sulfate | 0.0150 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | 3 | 30 | |
| Endosulfan Sulfate [2C] | 0.0153 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | 3 | 30 | |
| Endrin | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 3 | 30 | |
| Endrin [2C] | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 3 | 30 | |
| Endrin Ketone | 0.0159 | 0.0025 | mg/kg wet | 0.01250 | | 127 | 40-140 | 4 | 30 | |
| Endrin Ketone [2C] | 0.0159 | 0.0025 | mg/kg wet | 0.01250 | | 127 | 40-140 | 4 | 30 | |
| gamma-BHC (Lindane) | 0.0137 | 0.0015 | mg/kg wet | 0.01250 | | 110 | 40-140 | 2 | 30 | |
| gamma-BHC (Lindane) [2C] | 0.0141 | 0.0015 | mg/kg wet | 0.01250 | | 113 | 40-140 | 2 | 30 | |
| gamma-Chlordane | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | 3 | 30 | |
| gamma-Chlordane [2C] | 0.0157 | 0.0025 | mg/kg wet | 0.01250 | | 125 | 40-140 | 2 | 30 | |
| Heptachlor | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 1 | 30 | |
| Heptachlor [2C] | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 1 | 30 | |
| Heptachlor Epoxide | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 2 | 30 | |
| Heptachlor Epoxide [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 2 | 30 | |
| Hexachlorobenzene | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | 0.2 | 30 | |
| Hexachlorobenzene [2C] | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 0.4 | 30 | |
| Methoxychlor | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 5 | 30 | |
| Methoxychlor [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 3 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0138* | | mg/kg wet | *0.01250* | | *110* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0139* | | mg/kg wet | *0.01250* | | *111* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0125* | | mg/kg wet | *0.01250* | | *100* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0128* | | mg/kg wet | *0.01250* | | *102* | *30-150* | | | |
| **Batch DE40810 - 3546** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8081B Organochlorine Pesticides | | | | | | | | | | |
| **Batch DE40810 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 4,4´-DDD | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDD [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Chlordane (Total) | ND | 0.0200 | mg/kg wet | | | | | | | |
| Chlordane (Total) [2C] | ND | 0.0200 | mg/kg wet | | | | | | | |
| delta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| delta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) [2C] | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Toxaphene | ND | 0.125 | mg/kg wet | | | | | | | |
| Toxaphene [2C] | ND | 0.125 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8081B Organochlorine Pesticides | | | | | | | | | | |
| **Batch DE40810 - 3546** | | | | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0119* | | mg/kg wet | *0.01250* | | *95* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0117* | | mg/kg wet | *0.01250* | | *94* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0122* | | mg/kg wet | *0.01250* | | *97* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0122* | | mg/kg wet | *0.01250* | | *97* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 4,4´-DDD | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | | | |
| 4,4´-DDD [2C] | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | | | |
| 4,4´-DDE | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| 4,4´-DDE [2C] | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |
| 4,4´-DDT | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | | | |
| 4,4´-DDT [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | | | |
| Aldrin | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Aldrin [2C] | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| alpha-BHC | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| alpha-BHC [2C] | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| alpha-Chlordane | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | | | |
| alpha-Chlordane [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| beta-BHC | 0.0122 | 0.0025 | mg/kg wet | 0.01250 | | 97 | 40-140 | | | |
| beta-BHC [2C] | 0.0118 | 0.0025 | mg/kg wet | 0.01250 | | 94 | 40-140 | | | |
| delta-BHC | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| delta-BHC [2C] | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Dieldrin | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| Dieldrin [2C] | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| Endosulfan I | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | | | |
| Endosulfan I [2C] | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| Endosulfan II | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Endosulfan II [2C] | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| Endosulfan Sulfate | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| Endosulfan Sulfate [2C] | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Endrin | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |
| Endrin [2C] | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Endrin Ketone | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| Endrin Ketone [2C] | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |
| gamma-BHC (Lindane) | 0.0133 | 0.0015 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| gamma-BHC (Lindane) [2C] | 0.0132 | 0.0015 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| gamma-Chlordane | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | | | |
| gamma-Chlordane [2C] | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | | | |
| Heptachlor | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | | | |
| Heptachlor [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Heptachlor Epoxide | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Heptachlor Epoxide [2C] | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Hexachlorobenzene | 0.0119 | 0.0025 | mg/kg wet | 0.01250 | | 95 | 40-140 | | | |
| Hexachlorobenzene [2C] | 0.0118 | 0.0025 | mg/kg wet | 0.01250 | | 95 | 40-140 | | | |
| Methoxychlor | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| Methoxychlor [2C] | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40810 - 3546** | | | | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0134* | | mg/kg wet | *0.01250* | | *107* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0133* | | mg/kg wet | *0.01250* | | *106* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0125* | | mg/kg wet | *0.01250* | | *100* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0126* | | mg/kg wet | *0.01250* | | *100* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 4,4´-DDD | 0.0158 | 0.0025 | mg/kg wet | 0.01250 | | 126 | 40-140 | 6 | 30 | |
| 4,4´-DDD [2C] | 0.0155 | 0.0025 | mg/kg wet | 0.01250 | | 124 | 40-140 | 7 | 30 | |
| 4,4´-DDE | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | 6 | 30 | |
| 4,4´-DDE [2C] | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | 6 | 30 | |
| 4,4´-DDT | 0.0151 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | 4 | 30 | |
| 4,4´-DDT [2C] | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 5 | 30 | |
| Aldrin | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 7 | 30 | |
| Aldrin [2C] | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 6 | 30 | |
| alpha-BHC | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 5 | 30 | |
| alpha-BHC [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 6 | 30 | |
| alpha-Chlordane | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 6 | 30 | |
| alpha-Chlordane [2C] | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | 6 | 30 | |
| beta-BHC | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 5 | 30 | |
| beta-BHC [2C] | 0.0124 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | 5 | 30 | |
| delta-BHC | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 7 | 30 | |
| delta-BHC [2C] | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 5 | 30 | |
| Dieldrin | 0.0153 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | 6 | 30 | |
| Dieldrin [2C] | 0.0153 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | 7 | 30 | |
| Endosulfan I | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 6 | 30 | |
| Endosulfan I [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 6 | 30 | |
| Endosulfan II | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 7 | 30 | |
| Endosulfan II [2C] | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 7 | 30 | |
| Endosulfan Sulfate | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 5 | 30 | |
| Endosulfan Sulfate [2C] | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 6 | 30 | |
| Endrin | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | 6 | 30 | |
| Endrin [2C] | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 6 | 30 | |
| Endrin Ketone | 0.0150 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | 6 | 30 | |
| Endrin Ketone [2C] | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 6 | 30 | |
| gamma-BHC (Lindane) | 0.0140 | 0.0015 | mg/kg wet | 0.01250 | | 112 | 40-140 | 5 | 30 | |
| gamma-BHC (Lindane) [2C] | 0.0138 | 0.0015 | mg/kg wet | 0.01250 | | 110 | 40-140 | 5 | 30 | |
| gamma-Chlordane | 0.0158 | 0.0025 | mg/kg wet | 0.01250 | | 127 | 40-140 | 6 | 30 | |
| gamma-Chlordane [2C] | 0.0158 | 0.0025 | mg/kg wet | 0.01250 | | 126 | 40-140 | 7 | 30 | |
| Heptachlor | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 6 | 30 | |
| Heptachlor [2C] | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 6 | 30 | |
| Heptachlor Epoxide | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 5 | 30 | |
| Heptachlor Epoxide [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 6 | 30 | |
| Hexachlorobenzene | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | 5 | 30 | |
| Hexachlorobenzene [2C] | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | 6 | 30 | |
| Methoxychlor | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 5 | 30 | |
| Methoxychlor [2C] | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 5 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40810 - 3546** | | | | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0139* | | mg/kg wet | *0.01250* | | *111* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0137* | | mg/kg wet | *0.01250* | | *110* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0128* | | mg/kg wet | *0.01250* | | *102* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0129* | | mg/kg wet | *0.01250* | | *103* | *30-150* | | | |
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DE40659 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 2,4,5-T | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-T [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4-D | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-D [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-DB | ND | 0.048 | mg/kg wet | | | | | | | |
| 2,4-DB [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| Dalapon | ND | 0.046 | mg/kg wet | | | | | | | |
| Dalapon [2C] | ND | 0.046 | mg/kg wet | | | | | | | |
| Dicamba | ND | 0.009 | mg/kg wet | | | | | | | |
| Dicamba [2C] | ND | 0.009 | mg/kg wet | | | | | | | |
| Dichlorprop | ND | 0.047 | mg/kg wet | | | | | | | |
| Dichlorprop [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| Dinoseb | ND | 0.048 | mg/kg wet | | | | | | | |
| Dinoseb [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| MCPA | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPA [2C] | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPP | ND | 2.35 | mg/kg wet | | | | | | | |
| MCPP [2C] | ND | 2.35 | mg/kg wet | | | | | | | |
| *Surrogate: DCAA* | *0.149* | | mg/kg wet | *0.2000* | | *74* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.138* | | mg/kg wet | *0.2000* | | *69* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 2,4,5-T | 0.015 | 0.010 | mg/kg wet | 0.01900 | | 78 | 40-140 | | | |
| 2,4,5-T [2C] | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 86 | 40-140 | | | |
| 2,4,5-TP (Silvex) | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 82 | 40-140 | | | |
| 2,4,5-TP (Silvex) [2C] | 0.018 | 0.010 | mg/kg wet | 0.01900 | | 94 | 40-140 | | | |
| 2,4-D | 0.149 | 0.047 | mg/kg wet | 0.1880 | | 79 | 40-140 | | | |
| 2,4-D [2C] | 0.150 | 0.047 | mg/kg wet | 0.1880 | | 80 | 40-140 | | | |
| 2,4-DB | 0.160 | 0.048 | mg/kg wet | 0.1900 | | 84 | 40-140 | | | |
| 2,4-DB [2C] | 0.190 | 0.048 | mg/kg wet | 0.1900 | | 100 | 40-140 | | | |
| Dalapon | 0.339 | 0.046 | mg/kg wet | 0.4550 | | 74 | 40-140 | | | |
| Dalapon [2C] | 0.393 | 0.046 | mg/kg wet | 0.4550 | | 86 | 40-140 | | | |
| Dicamba | 0.015 | 0.009 | mg/kg wet | 0.01880 | | 78 | 40-140 | | | |
| Dicamba [2C] | 0.018 | 0.009 | mg/kg wet | 0.01880 | | 98 | 40-140 | | | |
| Dichlorprop | 0.184 | 0.047 | mg/kg wet | 0.1880 | | 98 | 40-140 | | | |
| Dichlorprop [2C] | 0.186 | 0.047 | mg/kg wet | 0.1880 | | 99 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DE40659 - 3546** | | | | | | | | | | |
| Dinoseb | 0.026 | 0.048 | mg/kg wet | 0.09500 | | 28 | 10-100 | | | |
| Dinoseb [2C] | 0.030 | 0.048 | mg/kg wet | 0.09500 | | 31 | 10-100 | | | |
| MCPA | 15.6 | 2.32 | mg/kg wet | 18.60 | | 84 | 40-140 | | | |
| MCPA [2C] | 18.2 | 2.32 | mg/kg wet | 18.60 | | 98 | 40-140 | | | |
| MCPP | 16.3 | 2.35 | mg/kg wet | 18.80 | | 87 | 40-140 | | | |
| MCPP [2C] | 18.4 | 2.35 | mg/kg wet | 18.80 | | 98 | 40-140 | | | |
| *Surrogate: DCAA* | *0.218* | | mg/kg wet | *0.2000* | | *109* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.206* | | mg/kg wet | *0.2000* | | *103* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 2,4,5-T | 0.013 | 0.010 | mg/kg wet | 0.01900 | | 68 | 40-140 | 14 | 30 | |
| 2,4,5-T [2C] | 0.014 | 0.010 | mg/kg wet | 0.01900 | | 74 | 40-140 | 15 | 30 | |
| 2,4,5-TP (Silvex) | 0.014 | 0.010 | mg/kg wet | 0.01900 | | 72 | 40-140 | 13 | 30 | |
| 2,4,5-TP (Silvex) [2C] | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 82 | 40-140 | 14 | 30 | |
| 2,4-D | 0.134 | 0.047 | mg/kg wet | 0.1880 | | 71 | 40-140 | 11 | 30 | |
| 2,4-D [2C] | 0.130 | 0.047 | mg/kg wet | 0.1880 | | 69 | 40-140 | 14 | 30 | |
| 2,4-DB | 0.144 | 0.048 | mg/kg wet | 0.1900 | | 76 | 40-140 | 11 | 30 | |
| 2,4-DB [2C] | 0.164 | 0.048 | mg/kg wet | 0.1900 | | 86 | 40-140 | 14 | 30 | |
| Dalapon | 0.309 | 0.046 | mg/kg wet | 0.4550 | | 68 | 40-140 | 9 | 30 | |
| Dalapon [2C] | 0.319 | 0.046 | mg/kg wet | 0.4550 | | 70 | 40-140 | 21 | 30 | |
| Dicamba | 0.014 | 0.009 | mg/kg wet | 0.01880 | | 72 | 40-140 | 8 | 30 | |
| Dicamba [2C] | 0.016 | 0.009 | mg/kg wet | 0.01880 | | 86 | 40-140 | 13 | 30 | |
| Dichlorprop | 0.164 | 0.047 | mg/kg wet | 0.1880 | | 87 | 40-140 | 12 | 30 | |
| Dichlorprop [2C] | 0.164 | 0.047 | mg/kg wet | 0.1880 | | 87 | 40-140 | 13 | 30 | |
| Dinoseb | 0.022 | 0.048 | mg/kg wet | 0.09500 | | 23 | 10-100 | 19 | 30 | |
| Dinoseb [2C] | 0.025 | 0.048 | mg/kg wet | 0.09500 | | 26 | 10-100 | 18 | 30 | |
| MCPA | 13.9 | 2.32 | mg/kg wet | 18.60 | | 75 | 40-140 | 11 | 30 | |
| MCPA [2C] | 16.0 | 2.32 | mg/kg wet | 18.60 | | 86 | 40-140 | 13 | 30 | |
| MCPP | 14.5 | 2.35 | mg/kg wet | 18.80 | | 77 | 40-140 | 12 | 30 | |
| MCPP [2C] | 15.8 | 2.35 | mg/kg wet | 18.80 | | 84 | 40-140 | 15 | 30 | |
| *Surrogate: DCAA* | *0.185* | | mg/kg wet | *0.2000* | | *92* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.172* | | mg/kg wet | *0.2000* | | *86* | *30-150* | | | |
| **Batch DE40762 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 2,4,5-T | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-T [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4-D | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-D [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-DB | ND | 0.048 | mg/kg wet | | | | | | | |
| 2,4-DB [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| Dalapon | ND | 0.046 | mg/kg wet | | | | | | | |
| Dalapon [2C] | ND | 0.046 | mg/kg wet | | | | | | | |
| Dicamba | ND | 0.009 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DE40762 - 3546** | | | | | | | | | | |
| Dicamba [2C] | ND | 0.009 | mg/kg wet | | | | | | | |
| Dichlorprop | ND | 0.047 | mg/kg wet | | | | | | | |
| Dichlorprop [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| Dinoseb | ND | 0.048 | mg/kg wet | | | | | | | |
| Dinoseb [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| MCPA | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPA [2C] | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPP | ND | 2.35 | mg/kg wet | | | | | | | |
| MCPP [2C] | ND | 2.35 | mg/kg wet | | | | | | | |
| *Surrogate: DCAA* | *0.156* | | mg/kg wet | *0.2000* | | *78* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.146* | | mg/kg wet | *0.2000* | | *73* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 2,4,5-T | 0.013 | 0.010 | mg/kg wet | 0.01900 | | 70 | 40-140 | | | |
| 2,4,5-T [2C] | 0.013 | 0.010 | mg/kg wet | 0.01900 | | 70 | 40-140 | | | |
| 2,4,5-TP (Silvex) | 0.014 | 0.010 | mg/kg wet | 0.01900 | | 74 | 40-140 | | | |
| 2,4,5-TP (Silvex) [2C] | 0.015 | 0.010 | mg/kg wet | 0.01900 | | 80 | 40-140 | | | |
| 2,4-D | 0.134 | 0.047 | mg/kg wet | 0.1880 | | 71 | 40-140 | | | |
| 2,4-D [2C] | 0.131 | 0.047 | mg/kg wet | 0.1880 | | 70 | 40-140 | | | |
| 2,4-DB | 0.154 | 0.048 | mg/kg wet | 0.1900 | | 81 | 40-140 | | | |
| 2,4-DB [2C] | 0.160 | 0.048 | mg/kg wet | 0.1900 | | 84 | 40-140 | | | |
| Dalapon | 0.316 | 0.046 | mg/kg wet | 0.4550 | | 69 | 40-140 | | | |
| Dalapon [2C] | 0.332 | 0.046 | mg/kg wet | 0.4550 | | 73 | 40-140 | | | |
| Dicamba | 0.013 | 0.009 | mg/kg wet | 0.01880 | | 70 | 40-140 | | | |
| Dicamba [2C] | 0.015 | 0.009 | mg/kg wet | 0.01880 | | 80 | 40-140 | | | |
| Dichlorprop | 0.168 | 0.047 | mg/kg wet | 0.1880 | | 89 | 40-140 | | | |
| Dichlorprop [2C] | 0.162 | 0.047 | mg/kg wet | 0.1880 | | 86 | 40-140 | | | |
| Dinoseb | 0.021 | 0.048 | mg/kg wet | 0.09500 | | 22 | 10-100 | | | |
| Dinoseb [2C] | 0.023 | 0.048 | mg/kg wet | 0.09500 | | 24 | 10-100 | | | |
| MCPA | 15.9 | 2.32 | mg/kg wet | 18.60 | | 85 | 40-140 | | | |
| MCPA [2C] | 16.9 | 2.32 | mg/kg wet | 18.60 | | 91 | 40-140 | | | |
| MCPP | 15.8 | 2.35 | mg/kg wet | 18.80 | | 84 | 40-140 | | | |
| MCPP [2C] | 16.5 | 2.35 | mg/kg wet | 18.80 | | 88 | 40-140 | | | |
| *Surrogate: DCAA* | *0.177* | | mg/kg wet | *0.2000* | | *88* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.178* | | mg/kg wet | *0.2000* | | *89* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 2,4,5-T | 0.015 | 0.010 | mg/kg wet | 0.01900 | | 78 | 40-140 | 11 | 30 | |
| 2,4,5-T [2C] | 0.015 | 0.010 | mg/kg wet | 0.01900 | | 78 | 40-140 | 11 | 30 | |
| 2,4,5-TP (Silvex) | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 84 | 40-140 | 13 | 30 | |
| 2,4,5-TP (Silvex) [2C] | 0.017 | 0.010 | mg/kg wet | 0.01900 | | 92 | 40-140 | 14 | 30 | |
| 2,4-D | 0.153 | 0.047 | mg/kg wet | 0.1880 | | 81 | 40-140 | 13 | 30 | |
| 2,4-D [2C] | 0.146 | 0.047 | mg/kg wet | 0.1880 | | 78 | 40-140 | 11 | 30 | |
| 2,4-DB | 0.171 | 0.048 | mg/kg wet | 0.1900 | | 90 | 40-140 | 11 | 30 | |
| 2,4-DB [2C] | 0.180 | 0.048 | mg/kg wet | 0.1900 | | 95 | 40-140 | 12 | 30 | |
| Dalapon | 0.376 | 0.046 | mg/kg wet | 0.4550 | | 83 | 40-140 | 18 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DE40762 - 3546** | | | | | | | | | | |
| Dalapon [2C] | 0.397 | 0.046 | mg/kg wet | 0.4550 | | 87 | 40-140 | 18 | 30 | |
| Dicamba | 0.016 | 0.009 | mg/kg wet | 0.01880 | | 84 | 40-140 | 18 | 30 | |
| Dicamba [2C] | 0.017 | 0.009 | mg/kg wet | 0.01880 | | 92 | 40-140 | 14 | 30 | |
| Dichlorprop | 0.194 | 0.047 | mg/kg wet | 0.1880 | | 103 | 40-140 | 14 | 30 | |
| Dichlorprop [2C] | 0.183 | 0.047 | mg/kg wet | 0.1880 | | 97 | 40-140 | 12 | 30 | |
| Dinoseb | 0.027 | 0.048 | mg/kg wet | 0.09500 | | 28 | 10-100 | 22 | 30 | |
| Dinoseb [2C] | 0.028 | 0.048 | mg/kg wet | 0.09500 | | 29 | 10-100 | 18 | 30 | |
| MCPA | 18.4 | 2.32 | mg/kg wet | 18.60 | | 99 | 40-140 | 15 | 30 | |
| MCPA [2C] | 19.3 | 2.32 | mg/kg wet | 18.60 | | 104 | 40-140 | 13 | 30 | |
| MCPP | 18.2 | 2.35 | mg/kg wet | 18.80 | | 97 | 40-140 | 14 | 30 | |
| MCPP [2C] | 19.2 | 2.35 | mg/kg wet | 18.80 | | 102 | 40-140 | 15 | 30 | |
| *Surrogate: DCAA* | *0.176* | | mg/kg wet | *0.2000* | | *88* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.174* | | mg/kg wet | *0.2000* | | *87* | *30-150* | | | |
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40243 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *4.10* | | mg/kg wet | *5.000* | | *82* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.7 | 0.2 | mg/kg wet | 2.500 | | 68 | 40-140 | | | |
| Docosane (C22) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Dodecane (C12) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Eicosane (C20) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Hexacosane (C26) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Hexadecane (C16) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Nonadecane (C19) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Nonane (C9) | 1.4 | 0.2 | mg/kg wet | 2.500 | | 58 | 30-140 | | | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Octadecane (C18) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40243 - 3546** | | | | | | | | | | |
| Tetracosane (C24) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| Tetradecane (C14) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 28.6 | 10.0 | mg/kg wet | 35.00 | | 82 | 40-140 | | | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *4.02* | | mg/kg wet | *5.000* | | *80* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 65 | 40-140 | 5 | 25 | |
| Docosane (C22) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 5 | 25 | |
| Dodecane (C12) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | 6 | 25 | |
| Eicosane (C20) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 5 | 25 | |
| Hexacosane (C26) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 4 | 25 | |
| Hexadecane (C16) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 5 | 25 | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 94 | 40-140 | 0.09 | 25 | |
| Nonadecane (C19) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | 5 | 25 | |
| Nonane (C9) | 1.4 | 0.2 | mg/kg wet | 2.500 | | 55 | 30-140 | 4 | 25 | |
| Octacosane (C28) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 3 | 25 | |
| Octadecane (C18) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | 6 | 25 | |
| Tetracosane (C24) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | 4 | 25 | |
| Tetradecane (C14) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | 6 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 27.4 | 10.0 | mg/kg wet | 35.00 | | 78 | 40-140 | 4 | 25 | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 1 | 25 | |
| *Surrogate: O-Terphenyl* | *3.75* | | mg/kg wet | *5.000* | | *75* | *40-140* | | | |
| **Batch DE40623 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *3.82* | | mg/kg wet | *5.000* | | *76* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 65 | 40-140 | | | |
| Docosane (C22) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| Dodecane (C12) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40623 - 3546** | | | | | | | | | | |
| Eicosane (C20) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Hexacosane (C26) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Hexadecane (C16) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Hexatriacontane (C36) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| Nonadecane (C19) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Nonane (C9) | 1.4 | 0.2 | mg/kg wet | 2.500 | | 55 | 30-140 | | | |
| Octacosane (C28) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Octadecane (C18) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Tetracosane (C24) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| Tetradecane (C14) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 28.1 | 10.0 | mg/kg wet | 35.00 | | 80 | 40-140 | | | |
| Triacontane (C30) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *3.79* | | mg/kg wet | *5.000* | | *76* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 63 | 40-140 | 3 | 25 | |
| Docosane (C22) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 0.6 | 25 | |
| Dodecane (C12) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | 2 | 25 | |
| Eicosane (C20) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | 0.6 | 25 | |
| Hexacosane (C26) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 0.1 | 25 | |
| Hexadecane (C16) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | 3 | 25 | |
| Hexatriacontane (C36) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 91 | 40-140 | 2 | 25 | |
| Nonadecane (C19) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 1 | 25 | |
| Nonane (C9) | 1.3 | 0.2 | mg/kg wet | 2.500 | | 53 | 30-140 | 4 | 25 | |
| Octacosane (C28) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | 0.1 | 25 | |
| Octadecane (C18) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | 3 | 25 | |
| Tetracosane (C24) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | 0.9 | 25 | |
| Tetradecane (C14) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | 3 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 27.6 | 10.0 | mg/kg wet | 35.00 | | 79 | 40-140 | 2 | 25 | |
| Triacontane (C30) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | 0.3 | 25 | |
| *Surrogate: O-Terphenyl* | *3.64* | | mg/kg wet | *5.000* | | *73* | *40-140* | | | |
| **Batch DE40661 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40661 - 3546** | | | | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *4.27* | | mg/kg wet | *5.000* | | *85* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| Docosane (C22) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Dodecane (C12) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Eicosane (C20) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Hexacosane (C26) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Hexadecane (C16) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Hexatriacontane (C36) | 2.9 | 0.2 | mg/kg wet | 2.500 | | 115 | 40-140 | | | |
| Nonadecane (C19) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 62 | 30-140 | | | |
| Octacosane (C28) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Octadecane (C18) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Tetracosane (C24) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Tetradecane (C14) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 32.2 | 10.0 | mg/kg wet | 35.00 | | 92 | 40-140 | | | |
| Triacontane (C30) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *4.29* | | mg/kg wet | *5.000* | | *86* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 0.5 | 25 | |
| Docosane (C22) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | 3 | 25 | |
| Dodecane (C12) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 0.2 | 25 | |
| Eicosane (C20) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | 2 | 25 | |
| Hexacosane (C26) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | 4 | 25 | |
| Hexadecane (C16) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | 3 | 25 | |
| Hexatriacontane (C36) | 2.7 | 0.2 | mg/kg wet | 2.500 | | 108 | 40-140 | 6 | 25 | |
| Nonadecane (C19) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 2 | 25 | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 63 | 30-140 | 2 | 25 | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | 4 | 25 | |
| Octadecane (C18) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 4 | 25 | |
| Tetracosane (C24) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 3 | 25 | |
| Tetradecane (C14) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | 1 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 31.6 | 10.0 | mg/kg wet | 35.00 | | 90 | 40-140 | 2 | 25 | |
| Triacontane (C30) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | 4 | 25 | |
| *Surrogate: O-Terphenyl* | *4.13* | | mg/kg wet | *5.000* | | *83* | *40-140* | | | |
| **Batch DE40662 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40662 - 3546** | | | | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *4.10* | | mg/kg wet | *5.000* | | *82* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 70 | 40-140 | | | |
| Docosane (C22) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Dodecane (C12) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Eicosane (C20) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Hexacosane (C26) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Hexadecane (C16) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Hexatriacontane (C36) | 2.6 | 0.2 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| Nonadecane (C19) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Nonane (C9) | 1.4 | 0.2 | mg/kg wet | 2.500 | | 57 | 30-140 | | | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Octadecane (C18) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Tetracosane (C24) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Tetradecane (C14) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 29.8 | 10.0 | mg/kg wet | 35.00 | | 85 | 40-140 | | | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *4.01* | | mg/kg wet | *5.000* | | *80* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | 3 | 25 | |
| Docosane (C22) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 2 | 25 | |
| Dodecane (C12) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | 3 | 25 | |
| Eicosane (C20) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 2 | 25 | |
| Hexacosane (C26) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 1 | 25 | |
| Hexadecane (C16) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | 2 | 25 | |
| Hexatriacontane (C36) | 2.7 | 0.2 | mg/kg wet | 2.500 | | 109 | 40-140 | 2 | 25 | |
| Nonadecane (C19) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 2 | 25 | |
| Nonane (C9) | 1.5 | 0.2 | mg/kg wet | 2.500 | | 60 | 30-140 | 4 | 25 | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 1 | 25 | |
| Octadecane (C18) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 2 | 25 | |
| Tetracosane (C24) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | 2 | 25 | |
| Tetradecane (C14) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 2 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 30.4 | 10.0 | mg/kg wet | 35.00 | | 87 | 40-140 | 2 | 25 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40662 - 3546** | | | | | | | | | | |
| Triacontane (C30) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | 0.6 | 25 | |
| *Surrogate: O-Terphenyl* | *4.10* | | mg/kg wet | *5.000* | | *82* | *40-140* | | | |
| **Batch DE40755 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *4.92* | | mg/kg wet | *5.000* | | *98* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| Docosane (C22) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Dodecane (C12) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Eicosane (C20) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Hexacosane (C26) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Hexadecane (C16) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Nonadecane (C19) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 64 | 30-140 | | | |
| Octacosane (C28) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Octadecane (C18) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Tetracosane (C24) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Tetradecane (C14) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 30.7 | 10.0 | mg/kg wet | 35.00 | | 88 | 40-140 | | | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *4.58* | | mg/kg wet | *5.000* | | *92* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | 0.3 | 25 | |
| Docosane (C22) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 93 | 40-140 | 3 | 25 | |
| Dodecane (C12) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 0.3 | 25 | |
| Eicosane (C20) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 91 | 40-140 | 2 | 25 | |
| Hexacosane (C26) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 95 | 40-140 | 3 | 25 | |
| Hexadecane (C16) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | 0.2 | 25 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40755 - 3546** | | | | | | | | | | |
| Hexatriacontane (C36) | 2.6 | 0.2 | mg/kg wet | 2.500 | | 105 | 40-140 | 8 | 25 | |
| Nonadecane (C19) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 90 | 40-140 | 2 | 25 | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 64 | 30-140 | 0.06 | 25 | |
| Octacosane (C28) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 90 | 40-140 | 3 | 25 | |
| Octadecane (C18) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | 1 | 25 | |
| Tetracosane (C24) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 89 | 40-140 | 3 | 25 | |
| Tetradecane (C14) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | 0.6 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 31.1 | 10.0 | mg/kg wet | 35.00 | | 89 | 40-140 | 1 | 25 | |
| Triacontane (C30) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | 4 | 25 | |
| *Surrogate: O-Terphenyl* | *4.53* | | mg/kg wet | *5.000* | | *91* | *40-140* | | | |
| **Classical Chemistry** | | | | | | | | | | |
| **Batch DE40635 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Conductivity | ND | 5 | umhos/cm | | | | | | | |
| **LCS** | | | | | | | | | | |
| Conductivity | 1280 | | umhos/cm | 1410 | | 91 | 90-110 | | | |
| **Batch DE40653 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Reactive Cyanide | ND | 2.0 | mg/kg | | | | | | | |
| Reactive Sulfide | ND | 2.0 | mg/kg | | | | | | | |
| **LCS** | | | | | | | | | | |
| Reactive Cyanide | 4.1 | 2.0 | mg/kg | 100.3 | | 4 | 0.68-5.41 | | | |
| Reactive Sulfide | 2.0 | 2.0 | mg/kg | 10.00 | | 20 | 0-44 | | | |
| **Batch DE40727 - General Preparation** | | | | | | | | | | |
| **Reference** | | | | | | | | | | |
| Flashpoint | 81 | | °F | 81.00 | | 100 | 97.9-102.1 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

**Notes and Definitions**

| | |
|---|---|
| P | Percent difference between primary and confirmation results exceeds 40% (P). |
| B+ | Blank Spike recovery is above upper control limit (B+). |
| CD- | Continuing Calibration %Diff/Drift is below control limit (CD-). |
| CD+ | Continuing Calibration %Diff/Drift is above control limit (CD+). |
| D | Diluted. |
| D+ | Relative percent difference for duplicate is outside of criteria (D+). |
| EL | Elevated Method Reporting Limits due to sample matrix (EL). |
| > | Greater than. |
| LC | Lower value is used due to matrix interferences (LC). |
| Z18 | Temperature is not within 23 +/-2 ºC. |
| Q | Calibration required quadratic regression (Q). |
| RRF | Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration |
| S+ | Surrogate recovery(ies) above upper control limit (S+). |
| U | Analyte included in the analysis, but not detected |
| WL | Results obtained from a deionized water leach of the sample. |
| X* | RSD of replicate analysis > 20%. Reanalysis produced similar results. |
| ICV+ | Initial Calibration Verification recovery is above upper control limit (ICV+). |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0124
Date Received: 5/3/2024
Project Due Date: 5/10/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** (Yes) / No / NA
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? (Yes) / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? (Yes) / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered
    c. Low Level VOA vials frozen: Date: 5/3/24 Time: 18:43 Yes / No To Be Lab Filtered By:

Sample Receiving Notes:

Two vials for E-5 have E-1 on labels. Times Correct. Bagged together.

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 544267 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 1 | 544268 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 1 | 544299 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 1 | 544315 | Yes | N/A | Yes | 8 oz jar | NP | |
| 1 | 544316 | Yes | N/A | Yes | 8 oz jar | NP | |
| 1 | 544347 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 544269 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 2 | 544270 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 2 | 544300 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 2 | 544317 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 544318 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 544348 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 544271 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 3 | 544272 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 3 | 544301 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 3 | 544319 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 544320 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 544349 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 544273 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 4 | 544274 | Yes | N/A | Yes | VOA Vial | DI Water | |

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24E0124

Date Received: 5/3/2024

| | | | | | | |
|---|---|---|---|---|---|---|
| 4 | 544302 | Yes | N/A | Yes | VOA Vial | MeOH |
| 4 | 544321 | Yes | N/A | Yes | 8 oz jar | NP |
| 4 | 544322 | Yes | N/A | Yes | 8 oz jar | NP |
| 4 | 544350 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 5 | 544275 | Yes | N/A | Yes | VOA Vial | DI Water |
| 5 | 544276 | Yes | N/A | Yes | VOA Vial | DI Water |
| 5 | 544303 | Yes | N/A | Yes | VOA Vial | MeOH |
| 5 | 544323 | Yes | N/A | Yes | 8 oz jar | NP |
| 5 | 544324 | Yes | N/A | Yes | 8 oz jar | NP |
| 5 | 544351 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 6 | 544277 | Yes | N/A | Yes | VOA Vial | DI Water |
| 6 | 544278 | Yes | N/A | Yes | VOA Vial | DI Water |
| 6 | 544304 | Yes | N/A | Yes | VOA Vial | MeOH |
| 6 | 544325 | Yes | N/A | Yes | 8 oz jar | NP |
| 6 | 544326 | Yes | N/A | Yes | 8 oz jar | NP |
| 6 | 544352 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 7 | 544279 | Yes | N/A | Yes | VOA Vial | DI Water |
| 7 | 544280 | Yes | N/A | Yes | VOA Vial | DI Water |
| 7 | 544305 | Yes | N/A | Yes | VOA Vial | MeOH |
| 7 | 544327 | Yes | N/A | Yes | 8 oz jar | NP |
| 7 | 544328 | Yes | N/A | Yes | 8 oz jar | NP |
| 7 | 544353 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 8 | 544281 | Yes | N/A | Yes | VOA Vial | DI Water |
| 8 | 544282 | Yes | N/A | Yes | VOA Vial | DI Water |
| 8 | 544306 | Yes | N/A | Yes | VOA Vial | MeOH |
| 8 | 544329 | Yes | N/A | Yes | 8 oz jar | NP |
| 8 | 544330 | Yes | N/A | Yes | 8 oz jar | NP |
| 8 | 544354 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 9 | 544283 | Yes | N/A | Yes | VOA Vial | DI Water |
| 9 | 544284 | Yes | N/A | Yes | VOA Vial | DI Water |
| 9 | 544307 | Yes | N/A | Yes | VOA Vial | MeOH |
| 9 | 544331 | Yes | N/A | Yes | 8 oz jar | NP |
| 9 | 544332 | Yes | N/A | Yes | 8 oz jar | NP |
| 9 | 544355 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 10 | 544285 | Yes | N/A | Yes | VOA Vial | DI Water |
| 10 | 544286 | Yes | N/A | Yes | VOA Vial | DI Water |
| 10 | 544308 | Yes | N/A | Yes | VOA Vial | MeOH |
| 10 | 544333 | Yes | N/A | Yes | 8 oz jar | NP |
| 10 | 544334 | Yes | N/A | Yes | 8 oz jar | NP |
| 10 | 544356 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 11 | 544287 | Yes | N/A | Yes | VOA Vial | DI Water |
| 11 | 544288 | Yes | N/A | Yes | VOA Vial | DI Water |
| 11 | 544309 | Yes | N/A | Yes | VOA Vial | MeOH |
| 11 | 544335 | Yes | N/A | Yes | 8 oz jar | NP |
| 11 | 544336 | Yes | N/A | Yes | 8 oz jar | NP |
| 11 | 544357 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 12 | 544289 | Yes | N/A | Yes | VOA Vial | DI Water |
| 12 | 544290 | Yes | N/A | Yes | VOA Vial | DI Water |
| 12 | 544310 | Yes | N/A | Yes | VOA Vial | MeOH |
| 12 | 544337 | Yes | N/A | Yes | 8 oz jar | NP |
| 12 | 544338 | Yes | N/A | Yes | 8 oz jar | NP |
| 12 | 544358 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 13 | 544291 | Yes | N/A | Yes | VOA Vial | DI Water |
| 13 | 544292 | Yes | N/A | Yes | VOA Vial | DI Water |
| 13 | 544311 | Yes | N/A | Yes | VOA Vial | MeOH |
| 13 | 544339 | Yes | N/A | Yes | 8 oz jar | NP |

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24E0124
Date Received: 5/3/2024

| | | | | | | |
|---|---|---|---|---|---|---|
| 13 | 544340 | Yes | N/A | Yes | 8 oz jar | NP |
| 13 | 544359 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 14 | 544293 | Yes | N/A | Yes | VOA Vial | DI Water |
| 14 | 544294 | Yes | N/A | Yes | VOA Vial | DI Water |
| 14 | 544312 | Yes | N/A | Yes | VOA Vial | MeOH |
| 14 | 544341 | Yes | N/A | Yes | 8 oz jar | NP |
| 14 | 544342 | Yes | N/A | Yes | 8 oz jar | NP |
| 14 | 544360 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 15 | 544295 | Yes | N/A | Yes | VOA Vial | DI Water |
| 15 | 544296 | Yes | N/A | Yes | VOA Vial | DI Water |
| 15 | 544313 | Yes | N/A | Yes | VOA Vial | MeOH |
| 15 | 544343 | Yes | N/A | Yes | 8 oz jar | NP |
| 15 | 544344 | Yes | N/A | Yes | 8 oz jar | NP |
| 15 | 544361 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 16 | 544297 | Yes | N/A | Yes | VOA Vial | DI Water |
| 16 | 544298 | Yes | N/A | Yes | VOA Vial | DI Water |
| 16 | 544314 | Yes | N/A | Yes | VOA Vial | MeOH |
| 16 | 544345 | Yes | N/A | Yes | 8 oz jar | NP |
| 16 | 544346 | Yes | N/A | Yes | 8 oz jar | NP |
| 16 | 544362 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 17 | 545072 | Yes | N/A | Yes | VOA Vial | MeOH |
| 17 | 545074 | Yes | N/A | Yes | VOA Vial | DI Water |
| 17 | 545075 | Yes | N/A | Yes | VOA Vial | DI Water |
| 17 | 545078 | Yes | N/A | Yes | 8 oz jar | NP |
| 17 | 545079 | Yes | N/A | Yes | 8 oz jar | NP |
| 17 | 545082 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 18 | 545073 | Yes | N/A | Yes | VOA Vial | MeOH |
| 18 | 545076 | Yes | N/A | Yes | VOA Vial | DI Water |
| 18 | 545077 | Yes | N/A | Yes | VOA Vial | DI Water |
| 18 | 545080 | Yes | N/A | Yes | 8 oz jar | NP |
| 18 | 545081 | Yes | N/A | Yes | 8 oz jar | NP |
| 18 | 545083 | Yes | N/A | Yes | 4 oz. Jar | NP |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials MM
Are barcode labels on correct containers? Yes / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: _____ Date & Time: 5/3/24 1836
Reviewed By: _____ Date & Time: 5/3/24 1843

1/15

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24E0124

| | | |
|---|---|---|
| **Turn Time** | 5 | Days |
| **Regulatory State** | Massachusetts | |
| **Reporting Limits** | | |

**Is this project for any of the following?:** ○ CT RCP ◉ MA MCP ○ RGP

**Electonic Deliverables:** ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID |
|---|---|---|---|---|---|
| 1 | 5-2-24 | 0950 | Composite | Soil | C-1 |
| 2 | " | 1010 | Composite | Soil | C-3 |
| 3 | " | 1030 | Composite | Soil | C-5 |
| 4 | " | 1055 | Composite | Soil | C-7 |
| 5 | " | 1100 | Composite | Soil | D-8.5 |
| 6 | " | 1340 | Composite | Soil | E-7 |
| 7 | " | 1330 | Composite | Soil | E-5 |
| 8 | " | 1310 | Composite | Soil | E-1 |
| 9 | " | 1345 | Composite | Soil | G-7 |
| 10 | " | 1350 | Composite | Soil | G-5 |

**Analysis**

| | RCRA8 Metals | PCB | TPH | SVOC - incl pyr | Pest - incl Tox | Herbicides | Reactivity | Conductivity | pH | Free Liquid | Flashpoint | VOC - high | VOC - low | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | V | V | | | |
| **Container Volume:** | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 7 | 7 | | | |
| **Preservation Code:** | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 10 | | | |
| **Number of Containers per Sample:** | 1 | | | | | 1 | | | | | 1 | 1 | 2 | | | |

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*

**Laboratory Use Only**

Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C /IR

**Sampled by :** DB and KD

**Comments:** Please specify "Other" preservative and containers types in this space

Run TCLP if fails 20x
~~run hexavalent chromium if total Chromium >100 ppm~~

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-3-24 1130 | 5/3/24 11:3 | 5/3/24 17:22 | 5/3/24 1722 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ML 5/6/24

2/5

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24E0124

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Reporting Limits | | |

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | RCRA8 Metals | PCB | TPH | SVOC - incl pyr | Pest - incl Tox | Herbicides | Reactivity | Conductivity | pH | Free Liquid | Flashpoint | VOC - high | VOC - low | HOLD | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 11 | 5-2-24 | 1145 | Composite | Soil | G-1 | | | | | | | | | | | | | | | | |
| 11 12 | " | 1430 | Composite | Soil | H-8.5 | | | | | | | | | | | | | | | | |
| 12 13 | " | 1405 | Composite | Soil | I-7 | | | | | | | | | | | | | | | | |
| 13 14 | " | 1400 | Composite | Soil | I-5 | | | | | | | | | | | | | | | | |
| 14 15 | " | 1120 | Composite | Soil | I-1 | | | | | | | | | | | | | | | | |
| 15 16 | 5-3-24 | 0845 | Composite | Soil | E-3 0-3 | | | | | | | | | | | | | | | | |
| 16 17 | 5-3-24 | 0900 | Composite | Soil | E-3 3-7 | | | | | | | | | | | | | | | | |
| 17 18 | " | 1115 | Composite | Soil | II-8.5 5-6 | X | X | X | X | X | X | X | X | X | X | X | X | | | | |
| — | " | 1125 | Composite | Soil | JJ/II-6 6-7 | | | | | | | | | | | | | | | | |
| | | | Composite | Soil | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | V | V | | | |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 7 | 7 | | | |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 10 | | | |
| | | | | | | | | | | | **Number of Containers per Sample:** | 1 | | | | | 1 | | | | | 1 | 1 | 2 | | | |

**Laboratory Use Only**

Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C Ice

**Sampled by :** DB and KD

**Comments:** Please specify "Other" preservative and containers types in this space

Run TCLP if fails 20x

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-3-24 1130 | 5/3/24 11:36 | 5/3/24 17:21 | 5/3/24 1722 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

## Marc Levesque

**From:** Dal Bello, Cassia <cdalbello@cecinc.com>
**Sent:** Friday, May 3, 2024 12:35 PM
**To:** Marc Levesque
**Cc:** Kitchen, Jonathan; Barboza, Dave
**Subject:** [*EXTERNAL*] 332-344 Sample off-hold
**Attachments:** Waste COC 5-3-2024 - II-8.5 Change.jpg

**CYBERSECURITY WARNING:** This email is sent from outside of The RISE Group, Inc.
**DO NOT** click links or open attachments unless you recognize the sender and have verified the content is safe.

Hi Marc,

We just had our last round of samples picked up from our site in New Bedford (project 332-344).
We identified on the COC that sample II-8.5 5-6 would be placed on hold. We would like to run this sample for all of the waste characterization parameters listed instead of placing it on hold.

Are you able to facilitate this change for us? I attached a corrected version of the COC.

Thanks!

Cassia

**Cassia Dal Bello** | *Assistant Project Manager*
Civil & Environmental Consultants, Inc.
2 Corporation Way, Suite 160
Peabody, MA 01960
**direct** 774.409.2670 **office** 774.501.2176
www.cecinc.com

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*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E0124**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 5:11 pm, May 31, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

## SAMPLE RECEIPT

The following samples were received on May 03, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Low Level VOA vials were frozen by ESS Laboratory on 5/03/24 at 18:43.**
**Tetrahydrofuran is reported above the MA CAM reporting limit of 0.010 mg/kg.**

**Question I: All samples for EPH and Metals were analyzed for a subset of the required MCP list per the client's request.**

**Revision 1 May 31, 2024: This report has been revised to include corrected Lead results for 24E0124-05.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E0124-01 | C-1 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-02 | C-3 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-03 | C-5 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-04 | C-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

| | | | |
|---|---|---|---|
| 24E0124-05 | D-8.5 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-06 | E-7 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-07 | E-5 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-08 | E-1 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-09 | G-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-10 | G-5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-11 | G-1 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-12 | H-8.5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-13 | I-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-14 | I-5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-15 | I-1 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-16 | E-3 0-3 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-17 | E-3 3-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24E0124-18 | II-8.5 5-6 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

## PROJECT NARRATIVE

**8081B Organochlorine Pesticides**

| | |
|---|---|
| 24E0124-15 | **Lower value is used due to matrix interferences (LC).** |
| | 4,4´-DDT |
| 24E0124-15 | **Percent difference between primary and confirmation results exceeds 40% (P).** |
| | 4,4´-DDT |

**8082A Polychlorinated Biphenyls (PCB)**

| | |
|---|---|
| 24E0124-11 | **Percent difference between primary and confirmation results exceeds 40% (P).** |
| | Aroclor 1260 |
| DE41504-BSD1 | **Relative percent difference for duplicate is outside of criteria (D+).** |
| | Aroclor 1260 (31% @ 30%), Aroclor 1260 [2C] (35% @ 30%) |

**Semi-Volatile Organic Compounds**

| | |
|---|---|
| 24E0124-18 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| D4E0117-CCV1 | **Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration** |
| | 2,4-Dimethylphenol (111% @ 80-120%) |
| D4E0117-CCV1 | **Calibration required quadratic regression (Q).** |
| | 2,4-Dinitrophenol (79% @ 40-160%), Di-n-octylphthalate (118% @ 80-120%) |
| D4E0117-CCV1 | **Continuing Calibration %Diff/Drift is above control limit (CD+).** |
| | Butylbenzylphthalate (22% @ 20%), Dibenzo(a,h)Anthracene (21% @ 20%), p-Terphenyl-d14 (28% @ 20%), Pyrene (23% @ 20%) |
| D4E0117-CCV1 | **Initial Calibration Verification recovery is above upper control limit (ICV+).** |
| | 2,4-Dimethylphenol |
| D4E0143-CCV1 | **Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration** |
| | 2,4-Dimethylphenol (95% @ 80-120%) |
| D4E0143-CCV1 | **Calibration required quadratic regression (Q).** |
| | 2,4-Dinitrophenol (100% @ 40-160%), Pentachlorophenol (102% @ 40-160%) |
| D4E0143-CCV1 | **Continuing Calibration %Diff/Drift is above control limit (CD+).** |
| | 2,4,6-Tribromophenol (21% @ 20%), Hexachlorobutadiene (22% @ 20%) |
| D4E0161-CCV1 | **Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration** |
| | 2,4-Dimethylphenol (96% @ 80-120%) |
| D4E0161-CCV1 | **Calibration required quadratic regression (Q).** |
| | 2,4-Dinitrophenol (71% @ 40-160%), Pentachlorophenol (101% @ 40-160%) |
| D4E0161-CCV1 | **Continuing Calibration %Diff/Drift is above control limit (CD+).** |
| | Hexachlorobutadiene (22% @ 20%) |
| DE40356-BLK1 | **Surrogate recovery(ies) above upper control limit (S+).** |
| | p-Terphenyl-d14 (149% @ 30-130%) |
| DE40356-BS1 | **Blank Spike recovery is above upper control limit (B+).** |
| | 2,4-Dimethylphenol (155% @ 30-130%) |
| DE40356-BS1 | **Surrogate recovery(ies) above upper control limit (S+).** |
| | 2,4,6-Tribromophenol (141% @ 30-130%), p-Terphenyl-d14 (144% @ 30-130%) |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

DE40356-BSD1 **Blank Spike recovery is above upper control limit (B+).**
2,4-Dimethylphenol (160% @ 30-130%)

DE40356-BSD1 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (140% @ 30-130%), p-Terphenyl-d14 (153% @ 30-130%)

DE40705-BSD1 **Blank Spike recovery is above upper control limit (B+).**
2,4-Dimethylphenol (131% @ 30-130%)

**Total Metals**

24E0124-04 **RSD of replicate analysis > 20%. Reanalysis produced similar results.**
Arsenic

DE42308-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
Arsenic (35% @ 30%), Cadmium (38% @ 30%), Chromium (37% @ 30%), Lead (36% @ 30%), Selenium (38% @ 30%), Silver (38% @ 30%)

**Volatile Organics Low Level**

D4E0122-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
Tetrachloroethene (23% @ 20%)

DE40817-BS1 **Blank Spike recovery is above upper control limit (B+).**
Acetone (162% @ 40-160%)

DE40817-BSD1 **Blank Spike recovery is above upper control limit (B+).**
Acetone (174% @ 40-160%)

DE40926-BS1 **Blank Spike recovery is above upper control limit (B+).**
Acetone (174% @ 40-160%)

DE40926-BSD1 **Blank Spike recovery is above upper control limit (B+).**
Acetone (165% @ 40-160%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E0124-01 through 24E0124-18**

Matrices: ( ) Ground Water/Surface Water (X) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| (X) 8260 VOC CAM II A | (X) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (X) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| (X) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | (X) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (X) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | (X) MassDEP EPH CAM IV B | (X) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (X) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (X) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (X) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (X) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes (X) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (X) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? ***Data User Note:*** ***Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*** | Yes ( ) No (X)* |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (X)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (X)* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: May 31, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **3.84** (0.82) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:20 | 2.7 100 | DE40606 |
| **Barium** | **15.4** (0.82) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:20 | 2.7 100 | DE40606 |
| Cadmium | ND (0.41) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:20 | 2.7 100 | DE40606 |
| **Chromium** | **13.2** (0.82) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:20 | 2.7 100 | DE40606 |
| **Lead** | **53.3** (4.08) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:20 | 2.7 100 | DE40606 |
| Mercury | ND (0.035) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:31 | 0.62 40 | DE40624 |
| Selenium | ND (4.08) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:20 | 2.7 100 | DE40606 |
| Silver | ND (0.41) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:20 | 2.7 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 5.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,1,1-Trichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,1,2,2-Tetrachloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,1,2-Trichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,1-Dichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,1-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,1-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,2,3-Trichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,2,3-Trichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,2,4-Trichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,2,4-Trimethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,2-Dibromoethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,2-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,2-Dichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,2-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,3,5-Trimethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,3-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,3-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,4-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 1,4-Dioxane | ND (0.108) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 2,2-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 2-Butanone | ND (0.0540) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 2-Chlorotoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 2-Hexanone | ND (0.0540) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 4-Chlorotoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| 4-Isopropyltoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 5.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0540) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Acetone | ND (0.0540) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Benzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Bromobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Bromochloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Bromodichloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Bromoform | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Bromomethane | ND (0.0108) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Carbon Disulfide | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Carbon Tetrachloride | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Chlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Chloroethane | ND (0.0108) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Chloroform | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Chloromethane | ND (0.0108) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| cis-1,2-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| cis-1,3-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Dibromochloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Dibromomethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Dichlorodifluoromethane | ND (0.0108) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Diethyl Ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Di-isopropyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Ethyl tertiary-butyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Ethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Hexachlorobutadiene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Isopropylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Methyl tert-Butyl Ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Methylene Chloride | ND (0.0270) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 5.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/6/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| n-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| n-Propylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| sec-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Styrene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| tert-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Tertiary-amyl methyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Tetrachloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Tetrahydrofuran | ND (0.0216) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Toluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| trans-1,2-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| trans-1,3-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Trichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Trichlorofluoromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Vinyl Chloride | ND (0.0108) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Xylene O | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Xylene P,M | ND (0.0108) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |
| Xylenes (Total) | ND (0.0108) | --- | 8260D Low | --- | 1 | MEK | 05/06/24 19:41 | D4E0096 | DE40605 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *110 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *99 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *104 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.553) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Acetophenone | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Aniline | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Anthracene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Benzo(a)anthracene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Benzo(a)pyrene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Benzo(b)fluoranthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Benzo(g,h,i)perylene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Benzo(k)fluoranthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| **bis(2-Ethylhexyl)phthalate** | **0.401** (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Butylbenzylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Chrysene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.553) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Fluoranthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Fluorene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Indeno(1,2,3-cd)Pyrene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Isophorone | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Naphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Phenanthrene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Phenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Pyrene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |
| Pyridine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/06/24 20:35 | D4E0117 | DE40356 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *81 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *86 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *84 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *92 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *84 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *89 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *84 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *105 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:50 | --- | DE41008 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:50 | --- | DE41008 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:50 | --- | DE41008 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:50 | --- | DE41008 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:50 | --- | DE41008 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:50 | --- | DE41008 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:50 | --- | DE41008 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:50 | --- | DE41008 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:50 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 20.7g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0213) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |
| Toxaphene | ND (0.133) | --- | 8081B | --- | 1 | 05/07/24 12:29 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *93 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |
| 2,4-D | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |
| Dalapon | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |
| Dinoseb | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |
| MCPA | ND (2.54) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |
| MCPP | ND (2.56) | --- | 8151A | --- | 1 | 05/10/24 12:05 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/3/24 19:32

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (11.0) | --- | 8100M | --- | 1 | 05/06/24 17:20 | --- | DE40243 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *75 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1
Date Sampled: 05/02/24 09:50
Percent Solids: 91

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-01
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 123** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **8.02** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.7** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:02 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.05** (0.72) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:22 | 2.98 100 | DE40606 |
| **Barium** | **14.1** (0.72) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:22 | 2.98 100 | DE40606 |
| Cadmium | ND (0.36) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:22 | 2.98 100 | DE40606 |
| **Chromium** | **6.84** (0.72) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:22 | 2.98 100 | DE40606 |
| **Lead** | **24.6** (3.60) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:22 | 2.98 100 | DE40606 |
| Mercury | ND (0.035) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:33 | 0.6 40 | DE40624 |
| Selenium | ND (3.60) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:22 | 2.98 100 | DE40606 |
| Silver | ND (0.36) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:22 | 2.98 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,1,1-Trichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,1,2,2-Tetrachloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,1,2-Trichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,1-Dichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,1-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,1-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,2,3-Trichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,2,3-Trichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,2,4-Trichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,2,4-Trimethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,2-Dibromoethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,2-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,2-Dichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,2-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,3,5-Trimethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,3-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,3-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,4-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 1,4-Dioxane | ND (0.107) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 2,2-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 2-Butanone | ND (0.0537) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 2-Chlorotoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 2-Hexanone | ND (0.0537) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 4-Chlorotoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| 4-Isopropyltoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0537) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Acetone | ND (0.0537) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Benzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Bromobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Bromochloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Bromodichloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Bromoform | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Bromomethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Carbon Disulfide | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Carbon Tetrachloride | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Chlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Chloroethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Chloroform | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Chloromethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| cis-1,2-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| cis-1,3-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Dibromochloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Dibromomethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Dichlorodifluoromethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Diethyl Ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Di-isopropyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Ethyl tertiary-butyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Ethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Hexachlorobutadiene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Isopropylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Methyl tert-Butyl Ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Methylene Chloride | ND (0.0269) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| n-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| n-Propylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| sec-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Styrene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| tert-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Tertiary-amyl methyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Tetrachloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Tetrahydrofuran | ND (0.0215) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Toluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| trans-1,2-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| trans-1,3-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Trichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Trichlorofluoromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Vinyl Chloride | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Xylene O | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Xylene P,M | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |
| Xylenes (Total) | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 17:58 | D4E0122 | DE40717 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *112 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *97 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *106 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.05) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.524) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.05) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Acetophenone | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Aniline | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Anthracene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Benzo(a)anthracene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Benzo(a)pyrene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Benzo(b)fluoranthene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Benzo(g,h,i)perylene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Benzo(k)fluoranthene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| bis(2-Ethylhexyl)phthalate | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Butylbenzylphthalate | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Chrysene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.524) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Fluoranthene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Fluorene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Indeno(1,2,3-cd)Pyrene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Isophorone | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Naphthalene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.05) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Phenanthrene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Phenol | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Pyrene | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |
| Pyridine | ND (0.262) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:06 | D4E0117 | DE40356 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *86 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *84 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *88 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *96 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *89 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *93 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *88 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *113 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/15/24 11:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/17/24 0:06 | --- | DE41504 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/17/24 0:06 | --- | DE41504 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/17/24 0:06 | --- | DE41504 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/17/24 0:06 | --- | DE41504 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/17/24 0:06 | --- | DE41504 |
| **Aroclor 1254 [2C]** | **0.08** (0.05) | --- | 8082A | --- | 1 | 05/17/24 0:06 | --- | DE41504 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/17/24 0:06 | --- | DE41504 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/17/24 0:06 | --- | DE41504 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/17/24 0:06 | --- | DE41504 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 19.8g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0217) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |
| Toxaphene | ND (0.136) | --- | 8081B | --- | 1 | 05/07/24 12:57 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *103 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *84 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |
| MCPA | ND (2.42) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |
| MCPP | ND (2.45) | --- | 8151A | --- | 1 | 05/10/24 12:33 | D4E0188 | DE40659 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 12:15

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (10.8) | --- | 8100M | --- | 1 | 05/06/24 23:12 | --- | DE40623 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *72 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3
Date Sampled: 05/02/24 10:10
Percent Solids: 93

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-02
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 59** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **7.75** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.7** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:02 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.96** (0.79) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:24 | 2.7 100 | DE40606 |
| **Barium** | **15.0** (0.79) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:24 | 2.7 100 | DE40606 |
| Cadmium | ND (0.39) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:24 | 2.7 100 | DE40606 |
| **Chromium** | **5.88** (0.79) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:24 | 2.7 100 | DE40606 |
| **Lead** | **169** (3.93) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:24 | 2.7 100 | DE40606 |
| **Mercury** | **0.035** (0.034) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:36 | 0.61 40 | DE40624 |
| Selenium | ND (3.93) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:24 | 2.7 100 | DE40606 |
| Silver | ND (0.39) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:24 | 2.7 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.58** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/10/24 14:49 | 50 50 | DE40923 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 5.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,1,1-Trichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,1,2,2-Tetrachloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,1,2-Trichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,1-Dichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,1-Dichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,1-Dichloropropene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,2,3-Trichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,2,3-Trichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,2,4-Trichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,2,4-Trimethylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,2-Dibromoethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,2-Dichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,2-Dichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,2-Dichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,3,5-Trimethylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,3-Dichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,3-Dichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,4-Dichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 1,4-Dioxane | ND (0.0982) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 2,2-Dichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 2-Butanone | ND (0.0491) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 2-Chlorotoluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 2-Hexanone | ND (0.0491) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 4-Chlorotoluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| 4-Isopropyltoluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 5.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0491) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Acetone | ND (0.0491) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Benzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Bromobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Bromochloromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Bromodichloromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Bromoform | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Bromomethane | ND (0.0098) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Carbon Disulfide | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Carbon Tetrachloride | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Chlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Chloroethane | ND (0.0098) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Chloroform | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Chloromethane | ND (0.0098) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| cis-1,2-Dichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| cis-1,3-Dichloropropene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Dibromochloromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Dibromomethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Dichlorodifluoromethane | ND (0.0098) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Diethyl Ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Di-isopropyl ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Ethyl tertiary-butyl ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Ethylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Hexachlorobutadiene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Isopropylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Methyl tert-Butyl Ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Methylene Chloride | ND (0.0246) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 5.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| n-Butylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| n-Propylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| sec-Butylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Styrene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| tert-Butylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Tertiary-amyl methyl ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Tetrachloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Tetrahydrofuran | ND (0.0196) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Toluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| trans-1,2-Dichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| trans-1,3-Dichloropropene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Trichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Trichlorofluoromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Vinyl Chloride | ND (0.0098) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Xylene O | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Xylene P,M | ND (0.0098) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |
| Xylenes (Total) | ND (0.0098) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:24 | D4E0122 | DE40717 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *112 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *96 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *105 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.04) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.520) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.04) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Acetophenone | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Aniline | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Anthracene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Benzo(a)anthracene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Benzo(a)pyrene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Benzo(b)fluoranthene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Benzo(g,h,i)perylene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Benzo(k)fluoranthene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| bis(2-Ethylhexyl)phthalate | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Butylbenzylphthalate | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Chrysene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.520) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Fluoranthene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Fluorene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Indeno(1,2,3-cd)Pyrene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Isophorone | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Naphthalene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.04) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Phenanthrene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Phenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Pyrene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |
| Pyridine | ND (0.260) | --- | 8270E | --- | 1 | TJ | 05/06/24 21:36 | D4E0117 | DE40356 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *88 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *85 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *93 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *99 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *92 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *97 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *96 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *121 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:30 | --- | DE41008 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:30 | --- | DE41008 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:30 | --- | DE41008 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:30 | --- | DE41008 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:30 | --- | DE41008 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:30 | --- | DE41008 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:30 | --- | DE41008 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:30 | --- | DE41008 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:30 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 19.7g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0215) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |
| Toxaphene | ND (0.135) | --- | 8081B | --- | 1 | 05/07/24 13:25 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *101 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |
| MCPA | ND (2.42) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |
| MCPP | ND (2.44) | --- | 8151A | --- | 1 | 05/10/24 13:02 | D4E0188 | DE40659 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *85 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 12:15

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **19.1** (10.9) | --- | 8100M | --- | 1 | 05/06/24 23:50 | --- | DE40623 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | 66 % | | 40-140 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 186** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **7.68** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.6** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:02 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5
Date Sampled: 05/02/24 10:30
Percent Solids: 94
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-03
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/8/24 17:42

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **20.1** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | --- | DE40856 |
| **Temperature (Max C)** | **21.4** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | --- | DE40856 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 ºC.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **X* 1.71** (0.81) | --- | 6010D | --- | 1 | KJB | 05/09/24 17:49 | 2.66 100 | DE40606 |
| **Barium** | **9.04** (0.81) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:26 | 2.66 100 | DE40606 |
| Cadmium | ND (0.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:26 | 2.66 100 | DE40606 |
| **Chromium** | **4.11** (0.81) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:26 | 2.66 100 | DE40606 |
| **Lead** | **10.9** (4.03) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:26 | 2.66 100 | DE40606 |
| Mercury | ND (0.035) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:38 | 0.6 40 | DE40624 |
| Selenium | ND (4.03) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:26 | 2.66 100 | DE40606 |
| Silver | ND (0.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:26 | 2.66 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 4.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,1,1-Trichloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,1,2,2-Tetrachloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,1,2-Trichloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,1-Dichloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,1-Dichloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,1-Dichloropropene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,2,3-Trichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,2,3-Trichloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,2,4-Trichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,2,4-Trimethylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,2-Dibromoethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,2-Dichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,2-Dichloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,2-Dichloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,3,5-Trimethylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,3-Dichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,3-Dichloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,4-Dichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 1,4-Dioxane | ND (0.131) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 2,2-Dichloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 2-Butanone | ND (0.0653) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 2-Chlorotoluene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 2-Hexanone | ND (0.0653) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 4-Chlorotoluene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| 4-Isopropyltoluene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 4.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0653) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Acetone | ND (0.0653) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Benzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Bromobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Bromochloromethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Bromodichloromethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Bromoform | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Bromomethane | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Carbon Disulfide | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Carbon Tetrachloride | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Chlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Chloroethane | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Chloroform | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Chloromethane | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| cis-1,2-Dichloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| cis-1,3-Dichloropropene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Dibromochloromethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Dibromomethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Dichlorodifluoromethane | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Diethyl Ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Di-isopropyl ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Ethyl tertiary-butyl ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Ethylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Hexachlorobutadiene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Isopropylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Methyl tert-Butyl Ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Methylene Chloride | ND (0.0327) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 4.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| n-Butylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| n-Propylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| sec-Butylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Styrene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| tert-Butylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Tertiary-amyl methyl ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Tetrachloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Tetrahydrofuran | ND (0.0261) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Toluene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| trans-1,2-Dichloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| trans-1,3-Dichloropropene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Trichloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Trichlorofluoromethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Vinyl Chloride | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Xylene O | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Xylene P,M | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |
| Xylenes (Total) | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 18:50 | D4E0122 | DE40717 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *114 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *96 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *108 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.528) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Acetophenone | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Aniline | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Anthracene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Benzo(a)anthracene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Benzo(a)pyrene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Benzo(b)fluoranthene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Benzo(g,h,i)perylene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Benzo(k)fluoranthene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| bis(2-Ethylhexyl)phthalate | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Butylbenzylphthalate | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Chrysene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.528) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Fluoranthene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Fluorene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Indeno(1,2,3-cd)Pyrene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Isophorone | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Naphthalene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Phenanthrene | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Phenol | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| **Pyrene** | **0.319** (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |
| Pyridine | ND (0.264) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:06 | D4E0117 | DE40356 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *87 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *89 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *88 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *93 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *88 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *93 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *87 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *116 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:50 | --- | DE41008 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:50 | --- | DE41008 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:50 | --- | DE41008 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:50 | --- | DE41008 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:50 | --- | DE41008 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:50 | --- | DE41008 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:50 | --- | DE41008 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:50 | --- | DE41008 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 21:50 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *65 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *54 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 20.9g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Aldrin | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0205) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Endrin | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0015) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |
| Toxaphene | ND (0.128) | --- | 8081B | --- | 1 | 05/07/24 13:52 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *92 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |
| MCPA | ND (2.42) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |
| MCPP | ND (2.44) | --- | 8151A | --- | 1 | 05/10/24 13:31 | D4E0188 | DE40659 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 12:15

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (10.8) | --- | 8100M | --- | 1 | 05/07/24 0:29 | --- | DE40623 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *68 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-7
Date Sampled: 05/02/24 10:55
Percent Solids: 93

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-04
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 36** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **7.46** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.8** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:08 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **1.77** (0.86) | --- | 6010D | --- | 1 | KJB | 05/24/24 13:13 | 2.59 100 | DE42308 |
| **Barium** | **22.1** (0.86) | --- | 6010D | --- | 1 | KJB | 05/24/24 13:13 | 2.59 100 | DE42308 |
| Cadmium | ND (0.43) | --- | 6010D | --- | 1 | KJB | 05/24/24 13:13 | 2.59 100 | DE42308 |
| **Chromium** | **4.17** (0.86) | --- | 6010D | --- | 1 | KJB | 05/24/24 13:13 | 2.59 100 | DE42308 |
| **Lead** | **73.8** (4.29) | --- | 6010D | --- | 1 | KJB | 05/24/24 13:13 | 2.59 100 | DE42308 |
| **Mercury** | **0.091** (0.035) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:40 | 0.63 40 | DE40624 |
| Selenium | ND (4.29) | --- | 6010D | --- | 1 | KJB | 05/24/24 13:13 | 2.59 100 | DE42308 |
| Silver | ND (0.43) | --- | 6010D | --- | 1 | KJB | 05/24/24 13:13 | 2.59 100 | DE42308 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.54** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/14/24 14:13 | 50 50 | DE41423 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 4.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,1,1-Trichloroethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,1,2,2-Tetrachloroethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,1,2-Trichloroethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,1-Dichloroethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,1-Dichloroethene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,1-Dichloropropene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,2,3-Trichlorobenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,2,3-Trichloropropane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,2,4-Trichlorobenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,2,4-Trimethylbenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,2-Dibromoethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,2-Dichlorobenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,2-Dichloroethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,2-Dichloropropane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,3,5-Trimethylbenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,3-Dichlorobenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,3-Dichloropropane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,4-Dichlorobenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 1,4-Dioxane | ND (0.126) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 2,2-Dichloropropane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 2-Butanone | ND (0.0631) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 2-Chlorotoluene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 2-Hexanone | ND (0.0631) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 4-Chlorotoluene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| 4-Isopropyltoluene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 4.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0631) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Acetone | ND (0.0631) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Benzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Bromobenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Bromochloromethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Bromodichloromethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Bromoform | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Bromomethane | ND (0.0126) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Carbon Disulfide | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Carbon Tetrachloride | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Chlorobenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Chloroethane | ND (0.0126) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Chloroform | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Chloromethane | ND (0.0126) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| cis-1,2-Dichloroethene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| cis-1,3-Dichloropropene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Dibromochloromethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Dibromomethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Dichlorodifluoromethane | ND (0.0126) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Diethyl Ether | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Di-isopropyl ether | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Ethyl tertiary-butyl ether | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Ethylbenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Hexachlorobutadiene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Isopropylbenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Methyl tert-Butyl Ether | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Methylene Chloride | ND (0.0316) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 4.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/7/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| n-Butylbenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| n-Propylbenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| sec-Butylbenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Styrene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| tert-Butylbenzene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Tertiary-amyl methyl ether | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Tetrachloroethene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Tetrahydrofuran | ND (0.0253) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Toluene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| trans-1,2-Dichloroethene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| trans-1,3-Dichloropropene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Trichloroethene | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Trichlorofluoromethane | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Vinyl Chloride | ND (0.0126) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Xylene O | ND (0.0063) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Xylene P,M | ND (0.0126) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |
| Xylenes (Total) | ND (0.0126) | --- | 8260D Low | --- | 1 | MEK | 05/07/24 19:15 | D4E0122 | DE40717 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *114 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *97 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *109 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.542) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Acetophenone | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Aniline | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Benzo(a)anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Benzo(a)pyrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Benzo(b)fluoranthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Benzo(g,h,i)perylene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Benzo(k)fluoranthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| bis(2-Ethylhexyl)phthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Butylbenzylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Chrysene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.542) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Fluoranthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Fluorene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Indeno(1,2,3-cd)Pyrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Isophorone | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Naphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Phenanthrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Phenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Pyrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |
| Pyridine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/06/24 22:36 | D4E0117 | DE40356 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *93 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *93 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *95 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *102 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *95 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *98 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *94 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *114 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:09 | --- | DE41008 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:09 | --- | DE41008 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:09 | --- | DE41008 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:09 | --- | DE41008 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:09 | --- | DE41008 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:09 | --- | DE41008 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:09 | --- | DE41008 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:09 | --- | DE41008 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:09 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *76 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *68 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 20.4g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| 4,4´-DDE [2C] | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0218) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |
| Toxaphene | ND (0.136) | --- | 8081B | --- | 1 | 05/07/24 14:20 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *92 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |
| 2,4-D | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |
| Dalapon | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |
| Dinoseb | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |
| MCPA [2C] | ND (2.51) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |
| MCPP | ND (2.54) | --- | 8151A | --- | 1 | 05/10/24 14:00 | D4E0188 | DE40659 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 12:15

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (11.6) | --- | 8100M | --- | 1 | 05/07/24 1:07 | --- | DE40623 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | 64 % | | 40-140 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 35** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **7.11** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.9** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:08 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-8.5
Date Sampled: 05/02/24 11:00
Percent Solids: 90
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-05
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/13/24 17:41

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **19.7** (N/A) | --- | 1311 | --- | 1 | RAP | 05/14/24 9:43 | --- | DE41362 |
| **Temperature (Max C)** | **21.6** (N/A) | --- | 1311 | --- | 1 | RAP | 05/14/24 9:43 | --- | DE41362 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **6.38** (0.88) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:35 | 2.77 100 | DE40606 |
| **Barium** | **58.0** (0.88) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:35 | 2.77 100 | DE40606 |
| Cadmium | ND (0.44) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:35 | 2.77 100 | DE40606 |
| **Chromium** | **11.8** (0.88) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:35 | 2.77 100 | DE40606 |
| **Lead** | **171** (4.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:35 | 2.77 100 | DE40606 |
| **Mercury** | **0.332** (0.038) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:42 | 0.64 40 | DE40624 |
| Selenium | ND (4.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:35 | 2.77 100 | DE40606 |
| Silver | ND (0.44) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:35 | 2.77 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.40** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/10/24 14:53 | 50 50 | DE40923 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 4.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,1,1-Trichloroethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,1,2,2-Tetrachloroethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,1,2-Trichloroethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,1-Dichloroethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,1-Dichloroethene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,1-Dichloropropene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,2,3-Trichlorobenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,2,3-Trichloropropane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,2,4-Trichlorobenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,2,4-Trimethylbenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,2-Dibromoethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,2-Dichlorobenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,2-Dichloroethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,2-Dichloropropane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,3,5-Trimethylbenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,3-Dichlorobenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,3-Dichloropropane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,4-Dichlorobenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 1,4-Dioxane | ND (0.135) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 2,2-Dichloropropane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 2-Butanone | ND (0.0677) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 2-Chlorotoluene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 2-Hexanone | ND (0.0677) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 4-Chlorotoluene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| 4-Isopropyltoluene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 4.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0677) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Acetone | ND (0.0677) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Benzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Bromobenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Bromochloromethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Bromodichloromethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Bromoform | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Bromomethane | ND (0.0135) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Carbon Disulfide | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Carbon Tetrachloride | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Chlorobenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Chloroethane | ND (0.0135) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Chloroform | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Chloromethane | ND (0.0135) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| cis-1,2-Dichloroethene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| cis-1,3-Dichloropropene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Dibromochloromethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Dibromomethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Dichlorodifluoromethane | ND (0.0135) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Diethyl Ether | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Di-isopropyl ether | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Ethyl tertiary-butyl ether | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Ethylbenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Hexachlorobutadiene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Isopropylbenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Methyl tert-Butyl Ether | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Methylene Chloride | ND (0.0339) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 4.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| n-Butylbenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| n-Propylbenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| sec-Butylbenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Styrene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| tert-Butylbenzene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Tertiary-amyl methyl ether | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Tetrachloroethene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Tetrahydrofuran | ND (0.0271) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Toluene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| trans-1,2-Dichloroethene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| trans-1,3-Dichloropropene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Trichloroethene | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Trichlorofluoromethane | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Vinyl Chloride | ND (0.0135) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Xylene O | ND (0.0068) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Xylene P,M | ND (0.0135) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |
| Xylenes (Total) | ND (0.0135) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:29 | D4E0149 | DE40817 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *115 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *99 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *109 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.030) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.19) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.595) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.19) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Acetophenone | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Aniline | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Anthracene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Benzo(a)anthracene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Benzo(a)pyrene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Benzo(b)fluoranthene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Benzo(g,h,i)perylene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Benzo(k)fluoranthene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| bis(2-Ethylhexyl)phthalate | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Butylbenzylphthalate | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Chrysene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.595) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Fluoranthene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Fluorene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Indeno(1,2,3-cd)Pyrene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Isophorone | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Naphthalene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.19) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Phenanthrene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Phenol | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Pyrene | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |
| Pyridine | ND (0.297) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:06 | D4E0117 | DE40356 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *95 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *91 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *96 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *102 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *97 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *101 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *95 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *121 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 22:29 | --- | DE41008 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 22:29 | --- | DE41008 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 22:29 | --- | DE41008 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 22:29 | --- | DE41008 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 22:29 | --- | DE41008 |
| Aroclor 1254 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 22:29 | --- | DE41008 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 22:29 | --- | DE41008 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 22:29 | --- | DE41008 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 22:29 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 20.9g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Aldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0233) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Endrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0018) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |
| Toxaphene | ND (0.146) | --- | 8081B | --- | 1 | 05/07/24 14:48 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *95 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *84 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |
| 2,4-D | ND (0.056) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.057) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |
| Dalapon | ND (0.054) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |
| Dicamba | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.056) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |
| Dinoseb | ND (0.057) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |
| MCPA | ND (2.78) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |
| MCPP | ND (2.81) | --- | 8151A | --- | 1 | 05/10/24 14:29 | D4E0188 | DE40659 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *85 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 12:15

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **19.6** (12.4) | --- | 8100M | --- | 1 | 05/07/24 1:46 | --- | DE40623 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *69 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 129** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **7.76** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.8** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:08 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-7
Date Sampled: 05/02/24 13:40
Percent Solids: 82
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-06
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/8/24 17:42

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **20.1** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | --- | DE40856 |
| **Temperature (Max C)** | **21.4** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | --- | DE40856 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **8.09** (0.77) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:37 | 2.83 100 | DE40606 |
| **Barium** | **104** (0.77) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:37 | 2.83 100 | DE40606 |
| Cadmium | ND (0.38) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:37 | 2.83 100 | DE40606 |
| **Chromium** | **12.5** (0.77) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:37 | 2.83 100 | DE40606 |
| **Lead** | **368** (3.84) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:37 | 2.83 100 | DE40606 |
| **Mercury** | **0.988** (0.173) | --- | 7471B | --- | 5 | AFV | 05/06/24 18:43 | 0.62 40 | DE40624 |
| Selenium | ND (3.84) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:37 | 2.83 100 | DE40606 |
| Silver | ND (0.38) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:37 | 2.83 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **1.38** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/10/24 14:58 | 50 50 | DE40923 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 4.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,1,1-Trichloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,1,2,2-Tetrachloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,1,2-Trichloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,1-Dichloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,1-Dichloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,1-Dichloropropene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,2,3-Trichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,2,3-Trichloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,2,4-Trichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,2,4-Trimethylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,2-Dibromoethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,2-Dichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,2-Dichloroethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,2-Dichloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,3,5-Trimethylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,3-Dichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,3-Dichloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,4-Dichlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 1,4-Dioxane | ND (0.121) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 2,2-Dichloropropane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 2-Butanone | ND (0.0604) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 2-Chlorotoluene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 2-Hexanone | ND (0.0604) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 4-Chlorotoluene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| 4-Isopropyltoluene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 4.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0604) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Acetone | ND (0.0604) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Benzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Bromobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Bromochloromethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Bromodichloromethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Bromoform | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Bromomethane | ND (0.0121) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Carbon Disulfide | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Carbon Tetrachloride | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Chlorobenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Chloroethane | ND (0.0121) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Chloroform | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Chloromethane | ND (0.0121) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| cis-1,2-Dichloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| cis-1,3-Dichloropropene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Dibromochloromethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Dibromomethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Dichlorodifluoromethane | ND (0.0121) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Diethyl Ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Di-isopropyl ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Ethyl tertiary-butyl ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Ethylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Hexachlorobutadiene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Isopropylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Methyl tert-Butyl Ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Methylene Chloride | ND (0.0302) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 4.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| n-Butylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| n-Propylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| sec-Butylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Styrene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| tert-Butylbenzene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Tertiary-amyl methyl ether | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Tetrachloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Tetrahydrofuran | ND (0.0241) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Toluene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| trans-1,2-Dichloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| trans-1,3-Dichloropropene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Trichloroethene | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Trichlorofluoromethane | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Vinyl Chloride | ND (0.0121) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Xylene O | ND (0.0060) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Xylene P,M | ND (0.0121) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |
| Xylenes (Total) | ND (0.0121) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 17:55 | D4E0149 | DE40817 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *111 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *94 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *107 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.13) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.566) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.13) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Acetophenone | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Aniline | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Anthracene** | **0.435** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Benzo(a)anthracene** | **1.29** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Benzo(a)pyrene** | **1.21** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Benzo(b)fluoranthene** | **0.919** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Benzo(g,h,i)perylene** | **0.750** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Benzo(k)fluoranthene** | **0.895** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| bis(2-Ethylhexyl)phthalate | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Butylbenzylphthalate | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Chrysene** | **1.20** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.566) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Fluoranthene** | **2.28** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Fluorene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Indeno(1,2,3-cd)Pyrene** | **0.803** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Isophorone | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Naphthalene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.13) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Phenanthrene** | **1.78** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Phenol | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| **Pyrene** | **2.54** (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |
| Pyridine | ND (0.283) | --- | 8270E | --- | 1 | TJ | 05/06/24 23:37 | D4E0117 | DE40356 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *91 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *93 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *94 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *101 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *92 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *97 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *93 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *122 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:49 | --- | DE41008 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:49 | --- | DE41008 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:49 | --- | DE41008 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:49 | --- | DE41008 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:49 | --- | DE41008 |
| **Aroclor 1254 [2C]** | **0.09** (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:49 | --- | DE41008 |
| Aroclor 1260 [2C] | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:49 | --- | DE41008 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:49 | --- | DE41008 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 22:49 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *58 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *46 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Aldrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0222) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Endrin | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0028) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |
| Toxaphene | ND (0.139) | --- | 8081B | --- | 1 | 05/07/24 15:15 | D4E0120 | DE40622 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *86 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *69 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |
| 2,4-D | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |
| Dalapon | ND (0.048) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |
| MCPA | ND (2.45) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |
| MCPP | ND (2.48) | --- | 8151A | --- | 1 | 05/10/24 14:57 | D4E0188 | DE40659 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *85 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 12:15

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **70.3** (10.9) | --- | 8100M | --- | 1 | 05/07/24 2:24 | --- | DE40623 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | 60 % | | 40-140 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 213** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **8.57** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.5** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:14 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-5
Date Sampled: 05/02/24 13:30
Percent Solids: 92
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-07
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/8/24 17:42

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **20.1** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | --- | DE40856 |
| **Temperature (Max C)** | **21.4** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | --- | DE40856 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **6.72** (0.78) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:39 | 2.81 100 | DE40606 |
| **Barium** | **216** (0.78) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:39 | 2.81 100 | DE40606 |
| Cadmium | ND (0.39) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:39 | 2.81 100 | DE40606 |
| **Chromium** | **26.7** (0.78) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:39 | 2.81 100 | DE40606 |
| **Lead** | **676** (3.92) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:39 | 2.81 100 | DE40606 |
| **Mercury** | **0.237** (0.036) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:50 | 0.6 40 | DE40624 |
| Selenium | ND (3.92) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:39 | 2.81 100 | DE40606 |
| **Silver** | **0.53** (0.39) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:39 | 2.81 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **2.63** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/10/24 15:00 | 50 50 | DE40923 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 5.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,1,1-Trichloroethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,1,2,2-Tetrachloroethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,1,2-Trichloroethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,1-Dichloroethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,1-Dichloroethene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,1-Dichloropropene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,2,3-Trichlorobenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,2,3-Trichloropropane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,2,4-Trichlorobenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,2,4-Trimethylbenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,2-Dibromoethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,2-Dichlorobenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,2-Dichloroethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,2-Dichloropropane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,3,5-Trimethylbenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,3-Dichlorobenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,3-Dichloropropane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,4-Dichlorobenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 1,4-Dioxane | ND (0.106) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 2,2-Dichloropropane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 2-Butanone | ND (0.0529) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 2-Chlorotoluene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 2-Hexanone | ND (0.0529) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 4-Chlorotoluene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| 4-Isopropyltoluene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 5.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0529) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Acetone | ND (0.0529) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Benzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Bromobenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Bromochloromethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Bromodichloromethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Bromoform | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Bromomethane | ND (0.0106) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Carbon Disulfide | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Carbon Tetrachloride | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Chlorobenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Chloroethane | ND (0.0106) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Chloroform | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Chloromethane | ND (0.0106) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| cis-1,2-Dichloroethene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| cis-1,3-Dichloropropene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Dibromochloromethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Dibromomethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Dichlorodifluoromethane | ND (0.0106) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Diethyl Ether | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Di-isopropyl ether | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Ethyl tertiary-butyl ether | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Ethylbenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Hexachlorobutadiene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Isopropylbenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Methyl tert-Butyl Ether | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Methylene Chloride | ND (0.0265) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 5.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| n-Butylbenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| n-Propylbenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| sec-Butylbenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Styrene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| tert-Butylbenzene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Tertiary-amyl methyl ether | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Tetrachloroethene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Tetrahydrofuran | ND (0.0212) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Toluene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| trans-1,2-Dichloroethene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| trans-1,3-Dichloropropene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Trichloroethene | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Trichlorofluoromethane | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Vinyl Chloride | ND (0.0106) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Xylene O | ND (0.0053) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Xylene P,M | ND (0.0106) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |
| Xylenes (Total) | ND (0.0106) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:20 | D4E0149 | DE40817 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *113 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *96 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *108 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.029) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.15) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.574) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.15) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Acetophenone | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Aniline | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Anthracene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Benzo(a)anthracene** | **1.00** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Benzo(a)pyrene** | **1.17** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Benzo(b)fluoranthene** | **0.933** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Benzo(g,h,i)perylene** | **0.839** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Benzo(k)fluoranthene** | **0.853** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| bis(2-Ethylhexyl)phthalate | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Butylbenzylphthalate** | **0.391** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Chrysene** | **0.930** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.574) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Fluoranthene** | **1.48** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Fluorene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Indeno(1,2,3-cd)Pyrene** | **0.915** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Isophorone | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Naphthalene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.15) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Phenanthrene** | **0.559** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Phenol | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| **Pyrene** | **1.48** (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |
| Pyridine | ND (0.287) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:07 | D4E0117 | DE40356 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *86 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *97 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *89 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *100 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *90 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *96 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *88 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *109 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:09 | --- | DE41008 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:09 | --- | DE41008 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:09 | --- | DE41008 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:09 | --- | DE41008 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:09 | --- | DE41008 |
| **Aroclor 1254 [2C]** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:09 | --- | DE41008 |
| Aroclor 1260 [2C] | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:09 | --- | DE41008 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:09 | --- | DE41008 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:09 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *70 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *66 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 20.6g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| 4,4´-DDE [2C] | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| beta-BHC [2C] | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0214) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |
| Toxaphene | ND (0.134) | --- | 8081B | --- | 1 | 05/07/24 15:43 | D4E0120 | DE40622 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *94 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 10g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 18:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |
| 2,4-D | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |
| 2,4-DB | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |
| Dalapon | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |
| Dichlorprop | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |
| Dinoseb | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |
| MCPA | ND (2.56) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |
| MCPP | ND (2.59) | --- | 8151A | --- | 1 | 05/10/24 15:26 | D4E0188 | DE40659 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 16:49

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **72.3** (23.1) | --- | 8100M | --- | 2 | 05/08/24 23:24 | --- | DE40661 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *100 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 145** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **8.50** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.8** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:14 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-08
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/8/24 17:42

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **20.1** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | --- | DE40856 |
| **Temperature (Max C)** | **21.4** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | --- | DE40856 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND (0.86) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:44 | 2.56 100 | DE40606 |
| Barium | ND (0.86) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:44 | 2.56 100 | DE40606 |
| Cadmium | ND (0.43) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:44 | 2.56 100 | DE40606 |
| Chromium | ND (0.86) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:44 | 2.56 100 | DE40606 |
| Lead | ND (4.30) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:44 | 2.56 100 | DE40606 |
| **Mercury** | **0.131** (0.036) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:52 | 0.61 40 | DE40624 |
| Selenium | ND (4.30) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:44 | 2.56 100 | DE40606 |
| Silver | ND (0.43) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:44 | 2.56 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,1,1-Trichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,1,2,2-Tetrachloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,1,2-Trichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,1-Dichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,1-Dichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,1-Dichloropropene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,2,3-Trichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,2,3-Trichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,2,4-Trichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,2,4-Trimethylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,2-Dibromoethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,2-Dichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,2-Dichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,2-Dichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,3,5-Trimethylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,3-Dichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,3-Dichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,4-Dichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 1,4-Dioxane | ND (0.110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 2,2-Dichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 2-Butanone | ND (0.0551) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 2-Chlorotoluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 2-Hexanone | ND (0.0551) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 4-Chlorotoluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| 4-Isopropyltoluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0551) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Acetone | ND (0.0551) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Benzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Bromobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Bromochloromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Bromodichloromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Bromoform | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Bromomethane | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Carbon Disulfide | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Carbon Tetrachloride | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Chlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Chloroethane | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Chloroform | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Chloromethane | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| cis-1,2-Dichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| cis-1,3-Dichloropropene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Dibromochloromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Dibromomethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Dichlorodifluoromethane | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Diethyl Ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Di-isopropyl ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Ethyl tertiary-butyl ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Ethylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Hexachlorobutadiene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Isopropylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Methyl tert-Butyl Ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Methylene Chloride | ND (0.0275) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| n-Butylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| n-Propylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| sec-Butylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Styrene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| tert-Butylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Tertiary-amyl methyl ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Tetrachloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Tetrahydrofuran | ND (0.0220) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Toluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| trans-1,2-Dichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| trans-1,3-Dichloropropene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Trichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Trichlorofluoromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Vinyl Chloride | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Xylene O | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Xylene P,M | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |
| Xylenes (Total) | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 18:46 | D4E0149 | DE40817 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *116 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *97 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *110 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.553) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Acetophenone | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Aniline | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Anthracene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Benzo(a)anthracene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Benzo(a)pyrene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Benzo(b)fluoranthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Benzo(g,h,i)perylene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Benzo(k)fluoranthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| bis(2-Ethylhexyl)phthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Butylbenzylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Chrysene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.553) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| **Fluoranthene** | **0.279** (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Fluorene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Indeno(1,2,3-cd)Pyrene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Isophorone | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Naphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Phenanthrene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Phenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| **Pyrene** | **0.365** (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |
| Pyridine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 05/07/24 0:37 | D4E0117 | DE40356 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *94 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *94 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *96 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *104 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *96 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *102 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *96 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *122 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:28 | --- | DE41008 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:28 | --- | DE41008 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:28 | --- | DE41008 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:28 | --- | DE41008 |
| **Aroclor 1248** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:28 | --- | DE41008 |
| **Aroclor 1254** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:28 | --- | DE41008 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:28 | --- | DE41008 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:28 | --- | DE41008 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 23:28 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *66 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *57 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 19.2g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Aldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0229) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Endrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |
| Toxaphene | ND (0.143) | --- | 8081B | --- | 1 | 05/07/24 16:11 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *79 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *65 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |
| 2,4-D | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |
| Dalapon | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |
| Dinoseb | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |
| MCPA | ND (2.51) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |
| MCPP | ND (2.54) | --- | 8151A | --- | 1 | 05/10/24 17:50 | D4E0188 | DE40762 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 16:49

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **63.4** (11.4) | --- | 8100M | --- | 1 | 05/08/24 17:33 | --- | DE40661 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *88 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-7
Date Sampled: 05/02/24 13:45
Percent Solids: 91

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-09
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 730** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **7.52** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.5** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:14 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **3.38** (0.73) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:48 | 2.98 100 | DE40606 |
| **Barium** | **18.1** (0.73) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:48 | 2.98 100 | DE40606 |
| Cadmium | ND (0.36) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:48 | 2.98 100 | DE40606 |
| **Chromium** | **6.30** (0.73) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:48 | 2.98 100 | DE40606 |
| **Lead** | **51.1** (3.65) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:48 | 2.98 100 | DE40606 |
| **Mercury** | **0.182** (0.033) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:54 | 0.65 40 | DE40624 |
| Selenium | ND (3.65) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:48 | 2.98 100 | DE40606 |
| Silver | ND (0.36) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:48 | 2.98 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 5.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,1,1-Trichloroethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,1,2,2-Tetrachloroethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,1,2-Trichloroethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,1-Dichloroethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,1-Dichloroethene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,1-Dichloropropene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,2,3-Trichlorobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,2,3-Trichloropropane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,2,4-Trichlorobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,2,4-Trimethylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,2-Dibromoethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,2-Dichlorobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,2-Dichloroethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,2-Dichloropropane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,3,5-Trimethylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,3-Dichlorobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,3-Dichloropropane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,4-Dichlorobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 1,4-Dioxane | ND (0.101) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 2,2-Dichloropropane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 2-Butanone | ND (0.0503) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 2-Chlorotoluene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 2-Hexanone | ND (0.0503) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 4-Chlorotoluene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| 4-Isopropyltoluene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 5.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0503) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Acetone | ND (0.0503) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Benzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Bromobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Bromochloromethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Bromodichloromethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Bromoform | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Bromomethane | ND (0.0101) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Carbon Disulfide | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Carbon Tetrachloride | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Chlorobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Chloroethane | ND (0.0101) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Chloroform | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Chloromethane | ND (0.0101) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| cis-1,2-Dichloroethene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| cis-1,3-Dichloropropene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Dibromochloromethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Dibromomethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Dichlorodifluoromethane | ND (0.0101) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Diethyl Ether | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Di-isopropyl ether | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Ethyl tertiary-butyl ether | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Ethylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Hexachlorobutadiene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Isopropylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Methyl tert-Butyl Ether | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Methylene Chloride | ND (0.0252) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 5.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| n-Butylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| n-Propylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| sec-Butylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Styrene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| tert-Butylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Tertiary-amyl methyl ether | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Tetrachloroethene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Tetrahydrofuran | ND (0.0201) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Toluene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| trans-1,2-Dichloroethene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| trans-1,3-Dichloropropene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Trichloroethene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Trichlorofluoromethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Vinyl Chloride | ND (0.0101) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Xylene O | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Xylene P,M | ND (0.0101) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |
| Xylenes (Total) | ND (0.0101) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:11 | D4E0149 | DE40817 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *114 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *96 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *109 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 1,2,4-Trichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 1,2-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 1,3-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 1,4-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2,4,5-Trichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2,4,6-Trichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2,4-Dichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2,4-Dimethylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2,4-Dinitrophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2,4-Dinitrotoluene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2,6-Dinitrotoluene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2-Chloronaphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2-Chlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2-Methylnaphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2-Methylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 2-Nitrophenol | ND (0.541) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 3,3´-Dichlorobenzidine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 3+4-Methylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 4-Bromophenyl-phenylether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 4-Chloroaniline | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| 4-Nitrophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Acenaphthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Acenaphthylene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Acetophenone | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Aniline | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Benzo(a)anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Benzo(a)pyrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Benzo(b)fluoranthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Benzo(g,h,i)perylene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Benzo(k)fluoranthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| bis(2-Chloroethoxy)methane | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| bis(2-Chloroethyl)ether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| bis(2-chloroisopropyl)Ether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| bis(2-Ethylhexyl)phthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Butylbenzylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Chrysene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Dibenzo(a,h)Anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Dibenzofuran | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Diethylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Dimethylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Di-n-butylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Di-n-octylphthalate | ND (0.541) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| **Fluoranthene** | **0.346** (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Fluorene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Hexachlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Hexachlorobutadiene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Hexachloroethane | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Indeno(1,2,3-cd)Pyrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Isophorone | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Naphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Nitrobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/3/24 19:41

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Pentachlorophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Phenanthrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Phenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| **Pyrene** | **0.438** (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |
| Pyridine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 05/07/24 1:07 | D4E0117 | DE40356 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *88 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *88 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *90 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *100 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *90 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *96 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *90 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *117 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 20.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 23:48 | --- | DE41008 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 23:48 | --- | DE41008 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 23:48 | --- | DE41008 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 23:48 | --- | DE41008 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 23:48 | --- | DE41008 |
| **Aroclor 1254** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/13/24 23:48 | --- | DE41008 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 23:48 | --- | DE41008 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 23:48 | --- | DE41008 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 23:48 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *71 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *65 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 20.5g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0212) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |
| Toxaphene | ND (0.133) | --- | 8081B | --- | 1 | 05/07/24 18:57 | D4E0120 | DE40622 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *88 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |
| 2,4-D | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |
| Dalapon | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |
| Dinoseb | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |
| MCPA | ND (2.50) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |
| MCPP | ND (2.53) | --- | 8151A | --- | 1 | 05/10/24 18:19 | D4E0188 | DE40762 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 16:49

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **20.7** (11.0) | --- | 8100M | --- | 1 | 05/08/24 18:11 | --- | DE40661 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | 90 % | | 40-140 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5
Date Sampled: 05/02/24 13:50
Percent Solids: 92

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-10
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 269** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **8.38** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.6** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:19 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **4.40** (0.83) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:50 | 2.71 100 | DE40606 |
| **Barium** | **50.0** (0.83) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:50 | 2.71 100 | DE40606 |
| Cadmium | ND (0.42) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:50 | 2.71 100 | DE40606 |
| **Chromium** | **12.3** (0.83) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:50 | 2.71 100 | DE40606 |
| **Lead** | **441** (4.16) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:50 | 2.71 100 | DE40606 |
| **Mercury** | **0.138** (0.037) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:56 | 0.61 40 | DE40624 |
| Selenium | ND (4.16) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:50 | 2.71 100 | DE40606 |
| Silver | ND (0.42) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:50 | 2.71 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **3.25** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/10/24 15:03 | 50 50 | DE40923 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 5.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,1,1-Trichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,1,2,2-Tetrachloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,1,2-Trichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,1-Dichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,1-Dichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,1-Dichloropropene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,2,3-Trichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,2,3-Trichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,2,4-Trichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,2,4-Trimethylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,2-Dibromoethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,2-Dichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,2-Dichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,2-Dichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,3,5-Trimethylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,3-Dichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,3-Dichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,4-Dichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 1,4-Dioxane | ND (0.111) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 2,2-Dichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 2-Butanone | ND (0.0553) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 2-Chlorotoluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 2-Hexanone | ND (0.0553) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 4-Chlorotoluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| 4-Isopropyltoluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 5.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0553) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Acetone | ND (0.0553) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Benzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Bromobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Bromochloromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Bromodichloromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Bromoform | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Bromomethane | ND (0.0111) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Carbon Disulfide | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Carbon Tetrachloride | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Chlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Chloroethane | ND (0.0111) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Chloroform | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Chloromethane | ND (0.0111) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| cis-1,2-Dichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| cis-1,3-Dichloropropene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Dibromochloromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Dibromomethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Dichlorodifluoromethane | ND (0.0111) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Diethyl Ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Di-isopropyl ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Ethyl tertiary-butyl ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Ethylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Hexachlorobutadiene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Isopropylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Methyl tert-Butyl Ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Methylene Chloride | ND (0.0277) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 5.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| n-Butylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| n-Propylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| sec-Butylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Styrene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| tert-Butylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Tertiary-amyl methyl ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Tetrachloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Tetrahydrofuran | ND (0.0221) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Toluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| trans-1,2-Dichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| trans-1,3-Dichloropropene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Trichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Trichlorofluoromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Vinyl Chloride | ND (0.0111) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Xylene O | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Xylene P,M | ND (0.0111) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |
| Xylenes (Total) | ND (0.0111) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 19:37 | D4E0149 | DE40817 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *119 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *95 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *114 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 1,2,4-Trichlorobenzene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 1,2-Dichlorobenzene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 1,3-Dichlorobenzene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 1,4-Dichlorobenzene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2,4,5-Trichlorophenol | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2,4,6-Trichlorophenol | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2,4-Dichlorophenol | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2,4-Dimethylphenol | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2,4-Dinitrophenol | ND (1.13) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2,4-Dinitrotoluene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2,6-Dinitrotoluene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2-Chloronaphthalene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2-Chlorophenol | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2-Methylnaphthalene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2-Methylphenol | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 2-Nitrophenol | ND (0.564) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 3,3´-Dichlorobenzidine | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 3+4-Methylphenol | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 4-Bromophenyl-phenylether | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 4-Chloroaniline | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| 4-Nitrophenol | ND (1.13) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Acenaphthene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Acenaphthylene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Acetophenone | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Aniline | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Anthracene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Benzo(a)anthracene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Benzo(a)pyrene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Benzo(b)fluoranthene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Benzo(g,h,i)perylene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Benzo(k)fluoranthene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| bis(2-Chloroethoxy)methane | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| bis(2-Chloroethyl)ether | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| bis(2-chloroisopropyl)Ether | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| bis(2-Ethylhexyl)phthalate | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Butylbenzylphthalate | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Chrysene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Dibenzo(a,h)Anthracene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Dibenzofuran | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Diethylphthalate | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Dimethylphthalate | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Di-n-butylphthalate | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Di-n-octylphthalate | ND (0.564) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| **Fluoranthene** | **0.308** (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Fluorene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Hexachlorobenzene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Hexachlorobutadiene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Hexachloroethane | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Indeno(1,2,3-cd)Pyrene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Isophorone | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Naphthalene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Nitrobenzene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Pentachlorophenol | ND (1.13) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Phenanthrene | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Phenol | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| **Pyrene** | **0.293** (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |
| Pyridine | ND (0.282) | --- | 8270E | --- | 1 | TJ | 05/07/24 21:51 | D4E0143 | DE40705 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *82 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *124 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *80 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *92 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *78 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *82 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *80 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *112 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/10/24 13:00

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/14/24 0:08 | --- | DE41008 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/14/24 0:08 | --- | DE41008 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/14/24 0:08 | --- | DE41008 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/14/24 0:08 | --- | DE41008 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/14/24 0:08 | --- | DE41008 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/14/24 0:08 | --- | DE41008 |
| **Aroclor 1260** | **P 0.1** (0.06) | --- | 8082A | --- | 1 | 05/14/24 0:08 | --- | DE41008 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/14/24 0:08 | --- | DE41008 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/14/24 0:08 | --- | DE41008 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *98 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *70 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 19.5g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4′-DDD | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| 4,4′-DDE | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| 4,4′-DDT | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Aldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| alpha-Chlordane [2C] | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0231) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Endrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |
| Toxaphene | ND (0.145) | --- | 8081B | --- | 1 | 05/07/24 19:24 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *97 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 10.5g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |
| 2,4-D | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |
| Dalapon | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |
| Dinoseb | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |
| MCPA | ND (2.50) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |
| MCPP | ND (2.53) | --- | 8151A | --- | 1 | 05/10/24 18:48 | D4E0188 | DE40762 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 16:49

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **27.5** (11.6) | --- | 8100M | --- | 1 | 05/08/24 21:29 | --- | DE40661 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *90 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 202** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **8.45** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.7** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:19 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1
Date Sampled: 05/02/24 11:45
Percent Solids: 89
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-11
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/8/24 17:42

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **20.1** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | --- | DE40856 |
| **Temperature (Max C)** | **21.4** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | --- | DE40856 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.79** (0.80) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:52 | 2.68 100 | DE40606 |
| **Barium** | **21.6** (0.80) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:52 | 2.68 100 | DE40606 |
| Cadmium | ND (0.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:52 | 2.68 100 | DE40606 |
| **Chromium** | **10.1** (0.80) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:52 | 2.68 100 | DE40606 |
| **Lead** | **17.6** (4.00) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:52 | 2.68 100 | DE40606 |
| **Mercury** | **0.070** (0.034) | --- | 7471B | --- | 1 | AFV | 05/06/24 16:58 | 0.63 40 | DE40624 |
| Selenium | ND (4.00) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:52 | 2.68 100 | DE40606 |
| Silver | ND (0.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:52 | 2.68 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,1,1-Trichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,1,2,2-Tetrachloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,1,2-Trichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,1-Dichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,1-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,1-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,2,3-Trichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,2,3-Trichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,2,4-Trichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,2,4-Trimethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,2-Dibromoethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,2-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,2-Dichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,2-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,3,5-Trimethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,3-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,3-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,4-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 1,4-Dioxane | ND (0.107) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 2,2-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 2-Butanone | ND (0.0536) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 2-Chlorotoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 2-Hexanone | ND (0.0536) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 4-Chlorotoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| 4-Isopropyltoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0536) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Acetone | ND (0.0536) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Benzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Bromobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Bromochloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Bromodichloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Bromoform | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Bromomethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Carbon Disulfide | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Carbon Tetrachloride | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Chlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Chloroethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Chloroform | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Chloromethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| cis-1,2-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| cis-1,3-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Dibromochloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Dibromomethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Dichlorodifluoromethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Diethyl Ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Di-isopropyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Ethyl tertiary-butyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Ethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Hexachlorobutadiene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Isopropylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Methyl tert-Butyl Ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Methylene Chloride | ND (0.0268) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| n-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| n-Propylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| sec-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Styrene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| tert-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Tertiary-amyl methyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Tetrachloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Tetrahydrofuran | ND (0.0214) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Toluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| trans-1,2-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| trans-1,3-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Trichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Trichlorofluoromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Vinyl Chloride | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Xylene O | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Xylene P,M | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |
| Xylenes (Total) | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:02 | D4E0149 | DE40817 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *114 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *96 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *108 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 1,2,4-Trichlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 1,2-Dichlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 1,3-Dichlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 1,4-Dichlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2,4,5-Trichlorophenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2,4,6-Trichlorophenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2,4-Dichlorophenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2,4-Dimethylphenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2,4-Dinitrophenol | ND (1.03) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2,4-Dinitrotoluene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2,6-Dinitrotoluene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2-Chloronaphthalene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2-Chlorophenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2-Methylnaphthalene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2-Methylphenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 2-Nitrophenol | ND (0.513) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 3,3´-Dichlorobenzidine | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 3+4-Methylphenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 4-Bromophenyl-phenylether | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 4-Chloroaniline | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| 4-Nitrophenol | ND (1.03) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Acenaphthene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Acenaphthylene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Acetophenone | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Aniline | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Anthracene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Benzo(a)anthracene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Benzo(a)pyrene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Benzo(b)fluoranthene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Benzo(g,h,i)perylene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Benzo(k)fluoranthene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| bis(2-Chloroethoxy)methane | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| bis(2-Chloroethyl)ether | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| bis(2-chloroisopropyl)Ether | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| bis(2-Ethylhexyl)phthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Butylbenzylphthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Chrysene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Dibenzo(a,h)Anthracene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Dibenzofuran | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Diethylphthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Dimethylphthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Di-n-butylphthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Di-n-octylphthalate | ND (0.513) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Fluoranthene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Fluorene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Hexachlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Hexachlorobutadiene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Hexachloroethane | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Indeno(1,2,3-cd)Pyrene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Isophorone | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Naphthalene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Nitrobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Pentachlorophenol | ND (1.03) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Phenanthrene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Phenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Pyrene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |
| Pyridine | ND (0.257) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:21 | D4E0143 | DE40705 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *85 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *128 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *84 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *95 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *82 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *85 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *83 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *116 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 12:54 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 12:54 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 12:54 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 12:54 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 12:54 | --- | DE41057 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/13/24 12:54 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 12:54 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 12:54 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 12:54 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *81 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *86 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 19.5g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0220) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |
| Toxaphene | ND (0.137) | --- | 8081B | --- | 1 | 05/07/24 19:52 | D4E0120 | DE40622 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *99 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *88 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |
| MCPA | ND (2.42) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |
| MCPP | ND (2.45) | --- | 8151A | --- | 1 | 05/10/24 19:16 | D4E0188 | DE40762 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *70 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 16:49

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **17.9** (11.1) | --- | 8100M | --- | 1 | 05/08/24 18:50 | --- | DE40661 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *87 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-8.5
Date Sampled: 05/02/24 14:30
Percent Solids: 93

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-12
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 306** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **8.22** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.7** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:19 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **5.81** (0.92) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:54 | 2.5 100 | DE40606 |
| **Barium** | **24.1** (0.92) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:54 | 2.5 100 | DE40606 |
| Cadmium | ND (0.46) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:54 | 2.5 100 | DE40606 |
| **Chromium** | **19.8** (0.92) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:54 | 2.5 100 | DE40606 |
| **Lead** | **27.3** (4.58) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:54 | 2.5 100 | DE40606 |
| **Mercury** | **0.093** (0.038) | --- | 7471B | --- | 1 | AFV | 05/06/24 17:00 | 0.6 40 | DE40624 |
| Selenium | ND (4.58) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:54 | 2.5 100 | DE40606 |
| Silver | ND (0.46) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:54 | 2.5 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 5.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,1,1-Trichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,1,2,2-Tetrachloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,1,2-Trichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,1-Dichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,1-Dichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,1-Dichloropropene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,2,3-Trichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,2,3-Trichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,2,4-Trichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,2,4-Trimethylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,2-Dibromoethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,2-Dichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,2-Dichloroethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,2-Dichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,3,5-Trimethylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,3-Dichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,3-Dichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,4-Dichlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 1,4-Dioxane | ND (0.110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 2,2-Dichloropropane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 2-Butanone | ND (0.0550) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 2-Chlorotoluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 2-Hexanone | ND (0.0550) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 4-Chlorotoluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| 4-Isopropyltoluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 5.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0550) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| **Acetone** | **0.0907** (0.0550) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Benzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Bromobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Bromochloromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Bromodichloromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Bromoform | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Bromomethane | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Carbon Disulfide | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Carbon Tetrachloride | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Chlorobenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Chloroethane | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Chloroform | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Chloromethane | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| cis-1,2-Dichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| cis-1,3-Dichloropropene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Dibromochloromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Dibromomethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Dichlorodifluoromethane | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Diethyl Ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Di-isopropyl ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Ethyl tertiary-butyl ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Ethylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Hexachlorobutadiene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Isopropylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Methyl tert-Butyl Ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Methylene Chloride | ND (0.0275) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 5.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| n-Butylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| n-Propylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| sec-Butylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Styrene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| tert-Butylbenzene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Tertiary-amyl methyl ether | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Tetrachloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Tetrahydrofuran | ND (0.0220) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Toluene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| trans-1,2-Dichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| trans-1,3-Dichloropropene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Trichloroethene | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Trichlorofluoromethane | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Vinyl Chloride | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Xylene O | ND (0.0055) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Xylene P,M | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |
| Xylenes (Total) | ND (0.0110) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:28 | D4E0149 | DE40817 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *119 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *95 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *110 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 1,2,4-Trichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 1,2-Dichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 1,3-Dichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 1,4-Dichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2,4,5-Trichlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2,4,6-Trichlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2,4-Dichlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2,4-Dimethylphenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2,4-Dinitrophenol | ND (1.10) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2,4-Dinitrotoluene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2,6-Dinitrotoluene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2-Chloronaphthalene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2-Chlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2-Methylnaphthalene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2-Methylphenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 2-Nitrophenol | ND (0.548) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 3,3´-Dichlorobenzidine | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 3+4-Methylphenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 4-Bromophenyl-phenylether | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 4-Chloroaniline | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| 4-Nitrophenol | ND (1.10) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Acenaphthene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Acenaphthylene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Acetophenone | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Aniline | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Anthracene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Benzo(a)anthracene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Benzo(a)pyrene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Benzo(b)fluoranthene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Benzo(g,h,i)perylene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Benzo(k)fluoranthene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| bis(2-Chloroethoxy)methane | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| bis(2-Chloroethyl)ether | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| bis(2-chloroisopropyl)Ether | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| bis(2-Ethylhexyl)phthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Butylbenzylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Chrysene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Dibenzo(a,h)Anthracene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Dibenzofuran | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Diethylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Dimethylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Di-n-butylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Di-n-octylphthalate | ND (0.548) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Fluoranthene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Fluorene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Hexachlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Hexachlorobutadiene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Hexachloroethane | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Indeno(1,2,3-cd)Pyrene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Isophorone | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Naphthalene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Nitrobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Pentachlorophenol | ND (1.10) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Phenanthrene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Phenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Pyrene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |
| Pyridine | ND (0.274) | --- | 8270E | --- | 1 | TJ | 05/07/24 22:52 | D4E0143 | DE40705 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *77 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *111 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *72 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *84 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *71 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *76 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *70 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *102 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 20.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 13:14 | --- | DE41057 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 13:14 | --- | DE41057 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 13:14 | --- | DE41057 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 13:14 | --- | DE41057 |
| **Aroclor 1248** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/13/24 13:14 | --- | DE41057 |
| **Aroclor 1254** | **0.3** (0.06) | --- | 8082A | --- | 1 | 05/13/24 13:14 | --- | DE41057 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 13:14 | --- | DE41057 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 13:14 | --- | DE41057 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 13:14 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *66 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 19.6g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Aldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0234) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Endrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0018) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |
| Toxaphene | ND (0.146) | --- | 8081B | --- | 1 | 05/07/24 20:20 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *95 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.011) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |
| 2,4-D | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.053) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |
| Dalapon | ND (0.051) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.052) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |
| Dinoseb | ND (0.053) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |
| MCPA | ND (2.58) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |
| MCPP | ND (2.61) | --- | 8151A | --- | 1 | 05/10/24 19:45 | D4E0188 | DE40762 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 16:49

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (11.9) | --- | 8100M | --- | 1 | 05/08/24 19:30 | --- | DE40661 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *84 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-7
Date Sampled: 05/02/24 14:05
Percent Solids: 87

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-13
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 177** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **6.90** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.7** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:24 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **3.94** (0.78) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:56 | 2.77 100 | DE40606 |
| **Barium** | **14.2** (0.78) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:56 | 2.77 100 | DE40606 |
| Cadmium | ND (0.39) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:56 | 2.77 100 | DE40606 |
| **Chromium** | **9.60** (0.78) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:56 | 2.77 100 | DE40606 |
| **Lead** | **19.4** (3.92) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:56 | 2.77 100 | DE40606 |
| **Mercury** | **0.127** (0.036) | --- | 7471B | --- | 1 | AFV | 05/06/24 17:02 | 0.6 40 | DE40624 |
| Selenium | ND (3.92) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:56 | 2.77 100 | DE40606 |
| Silver | ND (0.39) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:56 | 2.77 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,1,1-Trichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,1,2,2-Tetrachloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,1,2-Trichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,1-Dichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,1-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,1-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,2,3-Trichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,2,3-Trichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,2,4-Trichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,2,4-Trimethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,2-Dibromoethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,2-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,2-Dichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,2-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,3,5-Trimethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,3-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,3-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,4-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 1,4-Dioxane | ND (0.0952) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 2,2-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 2-Butanone | ND (0.0476) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 2-Chlorotoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 2-Hexanone | ND (0.0476) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 4-Chlorotoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| 4-Isopropyltoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0476) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Acetone | ND (0.0476) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Benzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Bromobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Bromochloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Bromodichloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Bromoform | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Bromomethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Carbon Disulfide | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Carbon Tetrachloride | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Chlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Chloroethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Chloroform | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Chloromethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| cis-1,2-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| cis-1,3-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Dibromochloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Dibromomethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Dichlorodifluoromethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Diethyl Ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Di-isopropyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Ethyl tertiary-butyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Ethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Hexachlorobutadiene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Isopropylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Methyl tert-Butyl Ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Methylene Chloride | ND (0.0238) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/8/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| n-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| n-Propylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| sec-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Styrene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| tert-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Tertiary-amyl methyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Tetrachloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Tetrahydrofuran | ND (0.0190) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Toluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| trans-1,2-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| trans-1,3-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Trichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Trichlorofluoromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Vinyl Chloride | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Xylene O | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Xylene P,M | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |
| Xylenes (Total) | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 05/08/24 20:53 | D4E0149 | DE40817 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *116 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *99 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *110 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.035** (0.027) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 1,2,4-Trichlorobenzene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 1,2-Dichlorobenzene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 1,3-Dichlorobenzene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 1,4-Dichlorobenzene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2,4,5-Trichlorophenol | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2,4,6-Trichlorophenol | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2,4-Dichlorophenol | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2,4-Dimethylphenol | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2,4-Dinitrophenol | ND (1.07) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2,4-Dinitrotoluene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2,6-Dinitrotoluene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2-Chloronaphthalene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2-Chlorophenol | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2-Methylnaphthalene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2-Methylphenol | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 2-Nitrophenol | ND (0.535) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 3,3´-Dichlorobenzidine | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 3+4-Methylphenol | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 4-Bromophenyl-phenylether | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 4-Chloroaniline | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| 4-Nitrophenol | ND (1.07) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Acenaphthene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Acenaphthylene** | **1.05** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Acetophenone | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Aniline | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Anthracene** | **0.824** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Benzo(a)anthracene** | **3.22** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Benzo(a)pyrene** | **2.23** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Benzo(b)fluoranthene** | **2.20** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Benzo(g,h,i)perylene** | **1.19** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Benzo(k)fluoranthene** | **0.711** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| bis(2-Chloroethoxy)methane | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| bis(2-Chloroethyl)ether | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| bis(2-chloroisopropyl)Ether | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| bis(2-Ethylhexyl)phthalate | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Butylbenzylphthalate | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Chrysene** | **4.09** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Dibenzo(a,h)Anthracene** | **0.376** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Dibenzofuran | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Diethylphthalate | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Dimethylphthalate | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Di-n-butylphthalate | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Di-n-octylphthalate | ND (0.535) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Fluoranthene** | **3.58** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Fluorene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Hexachlorobenzene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Hexachlorobutadiene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Hexachloroethane | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Indeno(1,2,3-cd)Pyrene** | **1.00** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Isophorone | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Naphthalene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Nitrobenzene | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Pentachlorophenol | ND (1.07) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Phenanthrene** | **2.48** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Phenol | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| **Pyrene** | **5.88** (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |
| Pyridine | ND (0.267) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:22 | D4E0143 | DE40705 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *85 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *114 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *81 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *90 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *79 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *84 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *78 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *105 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:33 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:33 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:33 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:33 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:33 | --- | DE41057 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:33 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:33 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:33 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:33 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *79 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 19g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Aldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0228) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Endrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |
| Toxaphene | ND (0.143) | --- | 8081B | --- | 1 | 05/07/24 20:47 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *90 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |
| 2,4-D | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |
| Dalapon | ND (0.048) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |
| MCPA | ND (2.45) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |
| MCPP | ND (2.48) | --- | 8151A | --- | 1 | 05/10/24 20:14 | D4E0188 | DE40762 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 17:41

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **16.0** (11.2) | --- | 8100M | --- | 1 | 05/07/24 21:30 | --- | DE40662 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *75 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-5
Date Sampled: 05/02/24 14:00
Percent Solids: 92

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-14
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 104** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **7.58** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.7** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:24 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **6.30** (0.82) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:58 | 2.7 100 | DE40606 |
| **Barium** | **44.7** (0.82) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:58 | 2.7 100 | DE40606 |
| Cadmium | ND (0.41) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:58 | 2.7 100 | DE40606 |
| **Chromium** | **15.4** (0.82) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:58 | 2.7 100 | DE40606 |
| **Lead** | **107** (4.12) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:58 | 2.7 100 | DE40606 |
| **Mercury** | **0.259** (0.037) | --- | 7471B | --- | 1 | AFV | 05/06/24 17:04 | 0.6 40 | DE40624 |
| Selenium | ND (4.12) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:58 | 2.7 100 | DE40606 |
| Silver | ND (0.41) | --- | 6010D | --- | 1 | KJB | 05/07/24 13:58 | 2.7 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.29** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/10/24 15:05 | 50 50 | DE40923 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,1,1-Trichloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,1,2,2-Tetrachloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,1,2-Trichloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,1-Dichloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,1-Dichloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,1-Dichloropropene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,2,3-Trichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,2,3-Trichloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,2,4-Trichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,2,4-Trimethylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,2-Dibromoethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,2-Dichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,2-Dichloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,2-Dichloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,3,5-Trimethylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,3-Dichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,3-Dichloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,4-Dichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 1,4-Dioxane | ND (0.0943) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 2,2-Dichloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 2-Butanone | ND (0.0471) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 2-Chlorotoluene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 2-Hexanone | ND (0.0471) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 4-Chlorotoluene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| 4-Isopropyltoluene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0471) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Acetone | ND (0.0471) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Benzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Bromobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Bromochloromethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Bromodichloromethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Bromoform | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Bromomethane | ND (0.0094) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Carbon Disulfide | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Carbon Tetrachloride | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Chlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Chloroethane | ND (0.0094) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Chloroform | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Chloromethane | ND (0.0094) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| cis-1,2-Dichloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| cis-1,3-Dichloropropene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Dibromochloromethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Dibromomethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Dichlorodifluoromethane | ND (0.0094) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Diethyl Ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Di-isopropyl ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Ethyl tertiary-butyl ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Ethylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Hexachlorobutadiene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Isopropylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Methyl tert-Butyl Ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Methylene Chloride | ND (0.0236) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| n-Butylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| n-Propylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| sec-Butylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Styrene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| tert-Butylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Tertiary-amyl methyl ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Tetrachloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Tetrahydrofuran | ND (0.0189) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Toluene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| trans-1,2-Dichloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| trans-1,3-Dichloropropene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Trichloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Trichlorofluoromethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Vinyl Chloride | ND (0.0094) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Xylene O | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Xylene P,M | ND (0.0094) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |
| Xylenes (Total) | ND (0.0094) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 13:40 | D4E0183 | DE40926 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *117 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *96 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *110 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 1,2,4-Trichlorobenzene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 1,2-Dichlorobenzene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 1,3-Dichlorobenzene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 1,4-Dichlorobenzene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2,4,5-Trichlorophenol | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2,4,6-Trichlorophenol | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2,4-Dichlorophenol | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2,4-Dimethylphenol | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2,4-Dinitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2,4-Dinitrotoluene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2,6-Dinitrotoluene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2-Chloronaphthalene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2-Chlorophenol | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2-Methylnaphthalene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2-Methylphenol | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 2-Nitrophenol | ND (0.556) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 3,3´-Dichlorobenzidine | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 3+4-Methylphenol | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 4-Bromophenyl-phenylether | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 4-Chloroaniline | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| 4-Nitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Acenaphthene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Acenaphthylene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Acetophenone | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Aniline | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Anthracene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| **Benzo(a)anthracene** | **0.382** (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| **Benzo(a)pyrene** | **0.398** (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| **Benzo(b)fluoranthene** | **0.462** (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Benzo(g,h,i)perylene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Benzo(k)fluoranthene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| bis(2-Chloroethoxy)methane | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| bis(2-Chloroethyl)ether | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| bis(2-chloroisopropyl)Ether | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| bis(2-Ethylhexyl)phthalate | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Butylbenzylphthalate | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| **Chrysene** | **0.434** (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Dibenzo(a,h)Anthracene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Dibenzofuran | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Diethylphthalate | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Dimethylphthalate | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Di-n-butylphthalate | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Di-n-octylphthalate | ND (0.556) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| **Fluoranthene** | **0.733** (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Fluorene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Hexachlorobenzene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Hexachlorobutadiene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Hexachloroethane | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Indeno(1,2,3-cd)Pyrene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Isophorone | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Naphthalene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Nitrobenzene | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Pentachlorophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| **Phenanthrene** | **0.382** (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Phenol | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| **Pyrene** | **0.687** (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |
| Pyridine | ND (0.278) | --- | 8270E | --- | 1 | TJ | 05/07/24 23:52 | D4E0143 | DE40705 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *88 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *117 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *86 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *94 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *84 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *85 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *82 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *108 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 20.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:53 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:53 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:53 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:53 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:53 | --- | DE41057 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:53 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:53 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:53 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 13:53 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *77 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *85 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 19.1g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| 4,4´-DDE [2C] | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| **4,4´-DDT** | **P, LC 0.0082** (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Aldrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| beta-BHC [2C] | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0233) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Dieldrin [2C] | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Endrin | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0029) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |
| Toxaphene | ND (0.146) | --- | 8081B | --- | 1 | 05/07/24 21:15 | D4E0120 | DE40622 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *94 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 10.5g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |
| 2,4-D | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |
| Dalapon | ND (0.048) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |
| MCPA | ND (2.46) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |
| MCPP | ND (2.49) | --- | 8151A | --- | 1 | 05/10/24 20:42 | D4E0188 | DE40762 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 17:41

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **28.1** (11.3) | --- | 8100M | --- | 1 | 05/07/24 22:10 | --- | DE40662 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | 71 % | | 40-140 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 39** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **6.92** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.7** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:24 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-1
Date Sampled: 05/02/24 11:20
Percent Solids: 90
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-15
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/8/24 17:42

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **20.1** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | --- | DE40856 |
| **Temperature (Max C)** | **21.4** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | --- | DE40856 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **5.39** (0.73) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:13 | 2.88 100 | DE40606 |
| **Barium** | **31.9** (0.73) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:13 | 2.88 100 | DE40606 |
| Cadmium | ND (0.36) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:13 | 2.88 100 | DE40606 |
| **Chromium** | **11.1** (0.73) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:13 | 2.88 100 | DE40606 |
| **Lead** | **188** (3.64) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:13 | 2.88 100 | DE40606 |
| **Mercury** | **0.145** (0.032) | --- | 7471B | --- | 1 | AFV | 05/06/24 17:19 | 0.65 40 | DE40624 |
| Selenium | ND (3.64) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:13 | 2.88 100 | DE40606 |
| Silver | ND (0.36) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:13 | 2.88 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.17** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 05/10/24 15:08 | 50 50 | DE40923 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,1,1-Trichloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,1,2,2-Tetrachloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,1,2-Trichloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,1-Dichloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,1-Dichloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,1-Dichloropropene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,2,3-Trichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,2,3-Trichloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,2,4-Trichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,2,4-Trimethylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,2-Dibromoethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,2-Dichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,2-Dichloroethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,2-Dichloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,3,5-Trimethylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,3-Dichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,3-Dichloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,4-Dichlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 1,4-Dioxane | ND (0.131) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 2,2-Dichloropropane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 2-Butanone | ND (0.0655) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 2-Chlorotoluene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 2-Hexanone | ND (0.0655) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 4-Chlorotoluene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| 4-Isopropyltoluene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0655) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Acetone | ND (0.0655) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Benzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Bromobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Bromochloromethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Bromodichloromethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Bromoform | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Bromomethane | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Carbon Disulfide | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Carbon Tetrachloride | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Chlorobenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Chloroethane | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Chloroform | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Chloromethane | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| cis-1,2-Dichloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| cis-1,3-Dichloropropene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Dibromochloromethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Dibromomethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Dichlorodifluoromethane | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Diethyl Ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Di-isopropyl ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Ethyl tertiary-butyl ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Ethylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Hexachlorobutadiene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Isopropylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Methyl tert-Butyl Ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Methylene Chloride | ND (0.0327) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| n-Butylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| n-Propylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| sec-Butylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Styrene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| tert-Butylbenzene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Tertiary-amyl methyl ether | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Tetrachloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Tetrahydrofuran | ND (0.0262) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Toluene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| trans-1,2-Dichloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| trans-1,3-Dichloropropene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Trichloroethene | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Trichlorofluoromethane | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Vinyl Chloride | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Xylene O | ND (0.0065) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Xylene P,M | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |
| Xylenes (Total) | ND (0.0131) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:06 | D4E0183 | DE40926 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *114 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *98 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *111 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 1,2,4-Trichlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 1,2-Dichlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 1,3-Dichlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 1,4-Dichlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2,4,5-Trichlorophenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2,4,6-Trichlorophenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2,4-Dichlorophenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2,4-Dimethylphenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2,4-Dinitrophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2,4-Dinitrotoluene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2,6-Dinitrotoluene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2-Chloronaphthalene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2-Chlorophenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2-Methylnaphthalene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2-Methylphenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 2-Nitrophenol | ND (0.529) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 3,3´-Dichlorobenzidine | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 3+4-Methylphenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 4-Bromophenyl-phenylether | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 4-Chloroaniline | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| 4-Nitrophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Acenaphthene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Acenaphthylene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Acetophenone | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Aniline | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Anthracene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| **Benzo(a)anthracene** | **0.287** (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| **Benzo(a)pyrene** | **0.318** (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| **Benzo(b)fluoranthene** | **0.355** (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Benzo(g,h,i)perylene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Benzo(k)fluoranthene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| bis(2-Chloroethoxy)methane | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| bis(2-Chloroethyl)ether | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| bis(2-chloroisopropyl)Ether | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| bis(2-Ethylhexyl)phthalate | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Butylbenzylphthalate | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| **Chrysene** | **0.317** (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Dibenzo(a,h)Anthracene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Dibenzofuran | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Diethylphthalate | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Dimethylphthalate | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Di-n-butylphthalate | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Di-n-octylphthalate | ND (0.529) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| **Fluoranthene** | **0.526** (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Fluorene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Hexachlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Hexachlorobutadiene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Hexachloroethane | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Indeno(1,2,3-cd)Pyrene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Isophorone | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Naphthalene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Nitrobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Pentachlorophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| **Phenanthrene** | **0.272** (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Phenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| **Pyrene** | **0.518** (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |
| Pyridine | ND (0.265) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:22 | D4E0143 | DE40705 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *86 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *115 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *84 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *90 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *80 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *84 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *81 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *105 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:12 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:12 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:12 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:12 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:12 | --- | DE41057 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:12 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:12 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:12 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:12 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 19.6g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0214) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |
| Toxaphene | ND (0.134) | --- | 8081B | --- | 1 | 05/07/24 21:43 | D4E0120 | DE40622 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *64 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |
| 2,4-D | ND (0.048) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.048) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |
| MCPA | ND (2.39) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |
| MCPP | ND (2.41) | --- | 8151A | --- | 1 | 05/10/24 21:11 | D4E0188 | DE40762 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *64 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 17:41

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **36.8** (10.5) | --- | 8100M | --- | 1 | 05/07/24 22:48 | --- | DE40662 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *75 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 124** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **7.96** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.6** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:29 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 0-3
Date Sampled: 05/03/24 08:45
Percent Solids: 95
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-16
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 5/8/24 17:42

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **20.1** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | --- | DE40856 |
| **Temperature (Max C)** | **21.4** (N/A) | --- | 1311 | --- | 1 | RAP | 05/09/24 9:42 | --- | DE40856 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.99** (0.77) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:15 | 2.7 100 | DE40606 |
| **Barium** | **14.9** (0.77) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:15 | 2.7 100 | DE40606 |
| Cadmium | ND (0.39) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:15 | 2.7 100 | DE40606 |
| **Chromium** | **5.89** (0.77) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:15 | 2.7 100 | DE40606 |
| **Lead** | **53.5** (3.87) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:15 | 2.7 100 | DE40606 |
| **Mercury** | **0.359** (0.031) | --- | 7471B | --- | 1 | AFV | 05/06/24 17:21 | 0.66 40 | DE40624 |
| Selenium | ND (3.87) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:15 | 2.7 100 | DE40606 |
| Silver | ND (0.39) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:15 | 2.7 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 4.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,1,1-Trichloroethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,1,2,2-Tetrachloroethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,1,2-Trichloroethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,1-Dichloroethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,1-Dichloroethene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,1-Dichloropropene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,2,3-Trichlorobenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,2,3-Trichloropropane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,2,4-Trichlorobenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,2,4-Trimethylbenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,2-Dibromoethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,2-Dichlorobenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,2-Dichloroethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,2-Dichloropropane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,3,5-Trimethylbenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,3-Dichlorobenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,3-Dichloropropane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,4-Dichlorobenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 1,4-Dioxane | ND (0.116) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 2,2-Dichloropropane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 2-Butanone | ND (0.0581) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 2-Chlorotoluene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 2-Hexanone | ND (0.0581) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 4-Chlorotoluene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| 4-Isopropyltoluene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 4.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0581) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Acetone | ND (0.0581) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Benzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Bromobenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Bromochloromethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Bromodichloromethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Bromoform | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Bromomethane | ND (0.0116) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Carbon Disulfide | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Carbon Tetrachloride | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Chlorobenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Chloroethane | ND (0.0116) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Chloroform | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Chloromethane | ND (0.0116) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| cis-1,2-Dichloroethene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| cis-1,3-Dichloropropene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Dibromochloromethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Dibromomethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Dichlorodifluoromethane | ND (0.0116) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Diethyl Ether | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Di-isopropyl ether | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Ethyl tertiary-butyl ether | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Ethylbenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Hexachlorobutadiene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Isopropylbenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Methyl tert-Butyl Ether | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Methylene Chloride | ND (0.0291) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 4.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| n-Butylbenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| n-Propylbenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| sec-Butylbenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Styrene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| tert-Butylbenzene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Tertiary-amyl methyl ether | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Tetrachloroethene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Tetrahydrofuran | ND (0.0232) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Toluene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| trans-1,2-Dichloroethene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| trans-1,3-Dichloropropene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Trichloroethene | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Trichlorofluoromethane | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Vinyl Chloride | ND (0.0116) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Xylene O | ND (0.0058) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Xylene P,M | ND (0.0116) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |
| Xylenes (Total) | ND (0.0116) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:31 | D4E0183 | DE40926 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *114 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *97 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *109 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.025) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 1,2,4-Trichlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 1,2-Dichlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 1,3-Dichlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 1,4-Dichlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2,4,5-Trichlorophenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2,4,6-Trichlorophenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2,4-Dichlorophenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2,4-Dimethylphenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2,4-Dinitrophenol | ND (1.00) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2,4-Dinitrotoluene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2,6-Dinitrotoluene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2-Chloronaphthalene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2-Chlorophenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2-Methylnaphthalene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2-Methylphenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 2-Nitrophenol | ND (0.500) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 3,3´-Dichlorobenzidine | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 3+4-Methylphenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 4-Bromophenyl-phenylether | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 4-Chloroaniline | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| 4-Nitrophenol | ND (1.00) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Acenaphthene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Acenaphthylene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Acetophenone | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Aniline | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Anthracene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| **Benzo(a)anthracene** | **0.326** (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| **Benzo(a)pyrene** | **0.359** (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| **Benzo(b)fluoranthene** | **0.365** (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Benzo(g,h,i)perylene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Benzo(k)fluoranthene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| bis(2-Chloroethoxy)methane | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| bis(2-Chloroethyl)ether | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| bis(2-chloroisopropyl)Ether | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| bis(2-Ethylhexyl)phthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Butylbenzylphthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| **Chrysene** | **0.319** (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Dibenzo(a,h)Anthracene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Dibenzofuran | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Diethylphthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Dimethylphthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Di-n-butylphthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Di-n-octylphthalate | ND (0.500) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| **Fluoranthene** | **0.505** (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Fluorene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Hexachlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Hexachlorobutadiene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Hexachloroethane | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Indeno(1,2,3-cd)Pyrene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Isophorone | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Naphthalene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Nitrobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Pentachlorophenol | ND (1.00) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Phenanthrene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Phenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| **Pyrene** | **0.598** (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |
| Pyridine | ND (0.250) | --- | 8270E | --- | 1 | TJ | 05/08/24 0:53 | D4E0143 | DE40705 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *83 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *116 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *81 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *91 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *77 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *83 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *78 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *106 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 19.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:32 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:32 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:32 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:32 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:32 | --- | DE41057 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:32 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:32 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:32 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 14:32 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *74 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 20.3g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/6/24 11:10

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| 4,4´-DDE | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| 4,4´-DDT | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Aldrin | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| alpha-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| alpha-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| beta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Chlordane (Total) | ND (0.0206) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| delta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Dieldrin | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Endosulfan I | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Endosulfan II | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Endosulfan Sulfate | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Endrin | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Endrin Ketone | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| gamma-BHC (Lindane) | ND (0.0015) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| gamma-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Heptachlor | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Heptachlor Epoxide | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Hexachlorobenzene | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Methoxychlor | ND (0.0026) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |
| Toxaphene | ND (0.129) | --- | 8081B | --- | 1 | 05/07/24 22:10 | D4E0120 | DE40622 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |
| 2,4-D | ND (0.048) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.048) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |
| MCPA | ND (2.38) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |
| MCPP | ND (2.41) | --- | 8151A | --- | 1 | 05/10/24 21:40 | D4E0188 | DE40762 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *67 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/6/24 17:41

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **20.6** (11.0) | --- | 8100M | --- | 1 | 05/07/24 23:27 | --- | DE40662 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | 73 % | | 40-140 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-3 3-7
Date Sampled: 05/03/24 09:00
Percent Solids: 96

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-17
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 206** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **8.70** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.6** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/03/24 20:29 | ml/5 min | DE40359 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **6.92** (1.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:30 | 2.8 100 | DE40606 |
| **Barium** | **55.4** (1.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:30 | 2.8 100 | DE40606 |
| Cadmium | ND (0.70) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:30 | 2.8 100 | DE40606 |
| **Chromium** | **9.25** (1.40) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:30 | 2.8 100 | DE40606 |
| **Lead** | **21.4** (6.98) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:30 | 2.8 100 | DE40606 |
| Mercury | ND (0.063) | --- | 7471B | --- | 1 | AFV | 05/06/24 17:23 | 0.61 40 | DE40624 |
| Selenium | ND (6.98) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:30 | 2.8 100 | DE40606 |
| Silver | ND (0.70) | --- | 6010D | --- | 1 | KJB | 05/07/24 14:30 | 2.8 100 | DE40606 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 3.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,1,1-Trichloroethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,1,2,2-Tetrachloroethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,1,2-Trichloroethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,1-Dichloroethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,1-Dichloroethene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,1-Dichloropropene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,2,3-Trichlorobenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,2,3-Trichloropropane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,2,4-Trichlorobenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,2,4-Trimethylbenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,2-Dibromoethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,2-Dichlorobenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,2-Dichloroethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,2-Dichloropropane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,3,5-Trimethylbenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,3-Dichlorobenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,3-Dichloropropane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,4-Dichlorobenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 1,4-Dioxane | ND (0.296) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 2,2-Dichloropropane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 2-Butanone | ND (0.148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 2-Chlorotoluene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 2-Hexanone | ND (0.148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 4-Chlorotoluene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| 4-Isopropyltoluene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 3.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| **Acetone** | **0.246** (0.148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Benzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Bromobenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Bromochloromethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Bromodichloromethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Bromoform | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Bromomethane | ND (0.0296) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Carbon Disulfide | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Carbon Tetrachloride | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Chlorobenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Chloroethane | ND (0.0296) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Chloroform | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Chloromethane | ND (0.0296) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| cis-1,2-Dichloroethene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| cis-1,3-Dichloropropene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Dibromochloromethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Dibromomethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Dichlorodifluoromethane | ND (0.0296) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Diethyl Ether | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Di-isopropyl ether | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Ethyl tertiary-butyl ether | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Ethylbenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Hexachlorobutadiene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Isopropylbenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Methyl tert-Butyl Ether | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Methylene Chloride | ND (0.0741) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 3.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 5/9/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| n-Butylbenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| n-Propylbenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| sec-Butylbenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Styrene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| tert-Butylbenzene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Tertiary-amyl methyl ether | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Tetrachloroethene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Tetrahydrofuran | ND (0.0593) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Toluene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| trans-1,2-Dichloroethene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| trans-1,3-Dichloropropene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Trichloroethene | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Trichlorofluoromethane | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Vinyl Chloride | ND (0.0296) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Xylene O | ND (0.0148) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Xylene P,M | ND (0.0296) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |
| Xylenes (Total) | ND (0.0296) | --- | 8260D Low | --- | 1 | MEK | 05/09/24 14:57 | D4E0183 | DE40926 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *121 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *92 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *111 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *106 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.099) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 1,2,4-Trichlorobenzene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 1,2-Dichlorobenzene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 1,3-Dichlorobenzene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 1,4-Dichlorobenzene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2,4,5-Trichlorophenol | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2,4,6-Trichlorophenol | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2,4-Dichlorophenol | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2,4-Dimethylphenol | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2,4-Dinitrophenol | ND (3.95) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2,4-Dinitrotoluene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2,6-Dinitrotoluene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2-Chloronaphthalene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2-Chlorophenol | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2-Methylnaphthalene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2-Methylphenol | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 2-Nitrophenol | ND (1.98) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 3,3´-Dichlorobenzidine | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 3+4-Methylphenol | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 4-Bromophenyl-phenylether | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 4-Chloroaniline | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| 4-Nitrophenol | ND (3.95) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Acenaphthene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Acenaphthylene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Acetophenone | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Aniline | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Anthracene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Benzo(a)anthracene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Benzo(a)pyrene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Benzo(b)fluoranthene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Benzo(g,h,i)perylene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Benzo(k)fluoranthene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| bis(2-Chloroethoxy)methane | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| bis(2-Chloroethyl)ether | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| bis(2-chloroisopropyl)Ether | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| bis(2-Ethylhexyl)phthalate | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Butylbenzylphthalate | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Chrysene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Dibenzo(a,h)Anthracene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Dibenzofuran | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Diethylphthalate | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Dimethylphthalate | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Di-n-butylphthalate | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Di-n-octylphthalate | ND (1.98) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Fluoranthene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Fluorene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Hexachlorobenzene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Hexachlorobutadiene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Hexachloroethane | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Indeno(1,2,3-cd)Pyrene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Isophorone | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Naphthalene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Nitrobenzene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 5/7/24 12:35

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Pentachlorophenol | ND (3.95) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Phenanthrene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Phenol | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Pyrene | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |
| Pyridine | ND (0.988) | --- | 8270E | --- | 2 | TJ | 05/08/24 21:17 | D4E0161 | DE40705 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *56 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *87 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *57 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *71 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *51 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *70 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *52 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *80 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 19g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.1) | --- | 8082A | --- | 1 | 05/13/24 18:07 | --- | DE41057 |
| Aroclor 1221 | ND (0.1) | --- | 8082A | --- | 1 | 05/13/24 18:07 | --- | DE41057 |
| Aroclor 1232 | ND (0.1) | --- | 8082A | --- | 1 | 05/13/24 18:07 | --- | DE41057 |
| Aroclor 1242 | ND (0.1) | --- | 8082A | --- | 1 | 05/13/24 18:07 | --- | DE41057 |
| Aroclor 1248 | ND (0.1) | --- | 8082A | --- | 1 | 05/13/24 18:07 | --- | DE41057 |
| Aroclor 1254 | ND (0.1) | --- | 8082A | --- | 1 | 05/13/24 18:07 | --- | DE41057 |
| Aroclor 1260 | ND (0.1) | --- | 8082A | --- | 1 | 05/13/24 18:07 | --- | DE41057 |
| Aroclor 1262 | ND (0.1) | --- | 8082A | --- | 1 | 05/13/24 18:07 | --- | DE41057 |
| Aroclor 1268 | ND (0.1) | --- | 8082A | --- | 1 | 05/13/24 18:07 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *78 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 19g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/8/24 11:45

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| 4,4´-DDE | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| 4,4´-DDT | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Aldrin | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| alpha-BHC | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| alpha-Chlordane | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| beta-BHC | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Chlordane (Total) | ND (0.0412) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| delta-BHC | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Dieldrin | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Endosulfan I | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Endosulfan II | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Endosulfan Sulfate | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Endrin | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Endrin Ketone | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| gamma-BHC (Lindane) | ND (0.0031) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| gamma-Chlordane | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Heptachlor | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Heptachlor Epoxide | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Hexachlorobenzene | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Methoxychlor | ND (0.0051) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |
| Toxaphene | ND (0.257) | --- | 8081B | --- | 1 | 05/08/24 16:04 | D4E0150 | DE40810 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 5/7/24 15:42

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.018) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |
| 2,4,5-TP (Silvex) | ND (0.018) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |
| 2,4-D | ND (0.091) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |
| 2,4-DB | ND (0.092) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |
| Dalapon | ND (0.088) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |
| Dicamba | ND (0.018) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |
| Dichlorprop | ND (0.091) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |
| Dinoseb | ND (0.092) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |
| MCPA | ND (4.50) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |
| MCPP | ND (4.55) | --- | 8151A | --- | 1 | 05/10/24 22:09 | D4E0188 | DE40762 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *49 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 5/7/24 20:45

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **273** (20.1) | --- | 8100M | --- | 1 | 05/09/24 7:47 | --- | DE40755 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | 64 % | | 40-140 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-8.5 5-6
Date Sampled: 05/03/24 11:15
Percent Solids: 51

ESS Laboratory Work Order: 24E0124
ESS Laboratory Sample ID: 24E0124-18
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 328** (5) | --- | 9050A | --- | 1 | LAB | 05/06/24 14:11 | umhos/cm | DE40635 |
| **Corrosivity (pH)** | **7.28** (N/A) | --- | 9045 | --- | 1 | JLK | 05/03/24 19:50 | S.U. | DE40349 |
| **Corrosivity (pH) Sample Temp** | **20.4** | --- | 2550B | --- | 1 | JLK | 05/03/24 19:50 | °C | DE40349 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | LAB | 05/07/24 13:45 | °F | DE40727 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 05/07/24 16:26 | ml/5 min | DE40735 |
| Reactive Cyanide | ND (3.7) | --- | 7.3.3.2 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | JLK | 05/06/24 16:41 | mg/kg | DE40653 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DE40606 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Arsenic | ND | 1.00 | mg/kg wet | | | | | | | |
| Barium | ND | 1.00 | mg/kg wet | | | | | | | |
| Cadmium | ND | 0.50 | mg/kg wet | | | | | | | |
| Chromium | ND | 1.00 | mg/kg wet | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| Selenium | ND | 5.00 | mg/kg wet | | | | | | | |
| Silver | ND | 0.50 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Arsenic | 70.1 | 3.33 | mg/kg wet | 75.60 | | 93 | 80-120 | | | |
| Barium | 819 | 3.33 | mg/kg wet | 372.0 | | 220 | 40-297 | | | |
| Cadmium | 239 | 1.67 | mg/kg wet | 259.0 | | 92 | 80-120 | | | |
| Chromium | 148 | 3.33 | mg/kg wet | 156.0 | | 95 | 80-120 | | | |
| Lead | 207 | 16.7 | mg/kg wet | 225.0 | | 92 | 80-120 | | | |
| Selenium | 73.3 | 16.7 | mg/kg wet | 82.70 | | 89 | 80-120 | | | |
| Silver | 48.6 | 1.67 | mg/kg wet | 51.00 | | 95 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Arsenic | 68.4 | 3.08 | mg/kg wet | 75.60 | | 90 | 80-120 | 2 | 30 | |
| Barium | 782 | 3.08 | mg/kg wet | 372.0 | | 210 | 40-297 | 5 | 30 | |
| Cadmium | 230 | 1.54 | mg/kg wet | 259.0 | | 89 | 80-120 | 4 | 30 | |
| Chromium | 142 | 3.08 | mg/kg wet | 156.0 | | 91 | 80-120 | 4 | 30 | |
| Lead | 201 | 15.4 | mg/kg wet | 225.0 | | 89 | 80-120 | 3 | 30 | |
| Selenium | 71.0 | 15.4 | mg/kg wet | 82.70 | | 86 | 80-120 | 3 | 30 | |
| Silver | 46.9 | 1.54 | mg/kg wet | 51.00 | | 92 | 80-120 | 4 | 30 | |
| **Batch DE40624 - 245.1/7470A** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Mercury | ND | 0.033 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Mercury | 22.1 | 2.91 | mg/kg wet | 25.50 | | 86 | 71-125 | | | |
| **LCS Dup** | | | | | | | | | | |
| Mercury | 20.2 | 3.30 | mg/kg wet | 25.50 | | 79 | 71-125 | 9 | 30 | |
| **Batch DE42308 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Arsenic | ND | 1.00 | mg/kg wet | | | | | | | |
| Barium | ND | 1.00 | mg/kg wet | | | | | | | |
| Cadmium | ND | 0.50 | mg/kg wet | | | | | | | |
| Chromium | ND | 1.00 | mg/kg wet | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| Selenium | ND | 5.00 | mg/kg wet | | | | | | | |
| Silver | ND | 0.50 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Arsenic | 87.3 | 3.33 | mg/kg wet | 75.60 | | 115 | 80-120 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DE42308 - 3050B** | | | | | | | | | | |
| Barium | 761 | 3.33 | mg/kg wet | 372.0 | | 205 | 40-297 | | | |
| Cadmium | 289 | 1.67 | mg/kg wet | 259.0 | | 111 | 69-131 | | | |
| Chromium | 180 | 3.33 | mg/kg wet | 156.0 | | 116 | 74-126 | | | |
| Lead | 252 | 16.7 | mg/kg wet | 225.0 | | 112 | 72-128 | | | |
| Selenium | 91.9 | 16.7 | mg/kg wet | 82.70 | | 111 | 70-129 | | | |
| Silver | 59.4 | 1.67 | mg/kg wet | 51.00 | | 116 | 57-143 | | | |
| **LCS Dup** | | | | | | | | | | |
| Arsenic | 61.3 | 2.99 | mg/kg wet | 75.60 | | 81 | 80-120 | 35 | 30 | D+ |
| Barium | 565 | 2.99 | mg/kg wet | 372.0 | | 152 | 40-297 | 30 | 30 | |
| Cadmium | 197 | 1.49 | mg/kg wet | 259.0 | | 76 | 69-131 | 38 | 30 | D+ |
| Chromium | 124 | 2.99 | mg/kg wet | 156.0 | | 79 | 74-126 | 37 | 30 | D+ |
| Lead | 174 | 14.9 | mg/kg wet | 225.0 | | 77 | 72-128 | 36 | 30 | D+ |
| Selenium | 62.3 | 14.9 | mg/kg wet | 82.70 | | 75 | 70-129 | 38 | 30 | D+ |
| Silver | 40.5 | 1.49 | mg/kg wet | 51.00 | | 79 | 57-143 | 38 | 30 | D+ |
| **1311 TCLP Metals** | | | | | | | | | | |
| **Batch DE40923 - 3005A_TCLP** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 0.05 | mg/L | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 0.45 | 0.05 | mg/L | 0.5000 | | 90 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 0.44 | 0.05 | mg/L | 0.5000 | | 89 | 80-120 | 2 | 20 | |
| **Batch DE41423 - 3005A_TCLP** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 0.05 | mg/L | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 0.47 | 0.05 | mg/L | 0.5000 | | 93 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 0.46 | 0.05 | mg/L | 0.5000 | | 92 | 80-120 | 1 | 20 | |
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dioxane | ND | 0.100 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Acetone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromoform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Carbon Disulfide | ND | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Chloroform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromomethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methylene Chloride | ND | 0.0250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.0050 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 0.0200 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.0100 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.0050 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.0100 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0516* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0491* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0499* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0512* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0511 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,1,1-Trichloroethane | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 0.0527 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 40-160 | | | |
| 1,1,2-Trichloroethane | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| 1,1-Dichloroethane | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| 1,1-Dichloroethene | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| 1,1-Dichloropropene | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,2,3-Trichloropropane | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 0.0519 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0510 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| 1,2-Dibromoethane | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,2-Dichlorobenzene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| 1,2-Dichloroethane | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,2-Dichloropropane | 0.0500 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,3-Dichlorobenzene | 0.0496 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,3-Dichloropropane | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| 1,4-Dichlorobenzene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,4-Dioxane | 1.02 | 0.100 | mg/kg wet | 1.000 | | 102 | 70-130 | | | |
| 2,2-Dichloropropane | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 2-Butanone | 0.299 | 0.0500 | mg/kg wet | 0.2500 | | 119 | 40-160 | | | |
| 2-Chlorotoluene | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| 2-Hexanone | 0.303 | 0.0500 | mg/kg wet | 0.2500 | | 121 | 40-160 | | | |
| 4-Chlorotoluene | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 4-Isopropyltoluene | 0.0480 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 0.264 | 0.0500 | mg/kg wet | 0.2500 | | 106 | 40-160 | | | |
| Acetone | 0.384 | 0.0500 | mg/kg wet | 0.2500 | | 154 | 40-160 | | | |
| Benzene | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Bromobenzene | 0.0512 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Bromochloromethane | 0.0496 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| Bromodichloromethane | 0.0580 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | | | |
| Bromoform | 0.0408 | 0.0050 | mg/kg wet | 0.05000 | | 82 | 40-160 | | | |
| Bromomethane | 0.0484 | 0.0100 | mg/kg wet | 0.05000 | | 97 | 40-160 | | | |
| Carbon Disulfide | 0.0520 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Carbon Tetrachloride | 0.0489 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Chlorobenzene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Chloroethane | 0.0488 | 0.0100 | mg/kg wet | 0.05000 | | 98 | 40-160 | | | |
| Chloroform | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Chloromethane | 0.0442 | 0.0100 | mg/kg wet | 0.05000 | | 88 | 40-160 | | | |
| cis-1,2-Dichloroethene | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| cis-1,3-Dichloropropene | 0.0529 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 40-160 | | | |
| Dibromochloromethane | 0.0493 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 40-160 | | | |
| Dibromomethane | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Dichlorodifluoromethane | 0.0301 | 0.0100 | mg/kg wet | 0.05000 | | 60 | 40-160 | | | |
| Diethyl Ether | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Di-isopropyl ether | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 0.0532 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Ethylbenzene | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| Hexachlorobutadiene | 0.0469 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 40-160 | | | |
| Isopropylbenzene | 0.0551 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| Methyl tert-Butyl Ether | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Methylene Chloride | 0.0453 | 0.0250 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| Naphthalene | 0.0497 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 40-160 | | | |
| n-Butylbenzene | 0.0502 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| n-Propylbenzene | 0.0517 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| sec-Butylbenzene | 0.0472 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| Styrene | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 40-160 | | | |
| tert-Butylbenzene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| Tertiary-amyl methyl ether | 0.0535 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| Tetrachloroethene | 0.0457 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| Tetrahydrofuran | 0.0541 | 0.0200 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Toluene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| trans-1,2-Dichloroethene | 0.0491 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| trans-1,3-Dichloropropene | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Trichloroethene | 0.0479 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Trichlorofluoromethane | 0.0466 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 40-160 | | | |
| Vinyl Chloride | 0.0451 | 0.0100 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| Xylene O | 0.0520 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Xylene P,M | 0.104 | 0.0100 | mg/kg wet | 0.1000 | | 104 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0507* | | mg/kg wet | *0.05000* | | *101* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0499* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0502* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0511* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0489 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 4 | 20 | |
| 1,1,1-Trichloroethane | 0.0475 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 4 | 20 | |
| 1,1,2,2-Tetrachloroethane | 0.0478 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 40-160 | 10 | 20 | |
| 1,1,2-Trichloroethane | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| 1,1-Dichloroethane | 0.0462 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 5 | 20 | |
| 1,1-Dichloroethene | 0.0466 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 4 | 20 | |
| 1,1-Dichloropropene | 0.0451 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | 5 | 20 | |
| 1,2,3-Trichlorobenzene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 4 | 20 | |
| 1,2,3-Trichloropropane | 0.0432 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 70-130 | 8 | 20 | |
| 1,2,4-Trichlorobenzene | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 3 | 20 | |
| 1,2,4-Trimethylbenzene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 1 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 0.0421 | 0.0050 | mg/kg wet | 0.05000 | | 84 | 70-130 | 9 | 20 | |
| 1,2-Dibromoethane | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| 1,2-Dichlorobenzene | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 2 | 20 | |
| 1,2-Dichloroethane | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 5 | 20 | |
| 1,2-Dichloropropane | 0.0478 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 5 | 20 | |
| 1,3,5-Trimethylbenzene | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 2 | 20 | |
| 1,3-Dichlorobenzene | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 3 | 20 | |
| 1,3-Dichloropropane | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 5 | 20 | |
| 1,4-Dichlorobenzene | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 1 | 20 | |
| 1,4-Dioxane | 0.910 | 0.100 | mg/kg wet | 1.000 | | 91 | 70-130 | 11 | 20 | |
| 2,2-Dichloropropane | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 4 | 20 | |
| 2-Butanone | 0.267 | 0.0500 | mg/kg wet | 0.2500 | | 107 | 40-160 | 11 | 20 | |
| 2-Chlorotoluene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 0.6 | 20 | |
| 2-Hexanone | 0.267 | 0.0500 | mg/kg wet | 0.2500 | | 107 | 40-160 | 13 | 20 | |
| 4-Chlorotoluene | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| 4-Isopropyltoluene | 0.0471 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 2 | 20 | |
| 4-Methyl-2-Pentanone | 0.233 | 0.0500 | mg/kg wet | 0.2500 | | 93 | 40-160 | 12 | 20 | |
| Acetone | 0.335 | 0.0500 | mg/kg wet | 0.2500 | | 134 | 40-160 | 14 | 20 | |
| Benzene | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 5 | 20 | |
| Bromobenzene | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 1 | 20 | |
| Bromochloromethane | 0.0479 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 3 | 20 | |
| Bromodichloromethane | 0.0552 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 5 | 20 | |
| Bromoform | 0.0380 | 0.0050 | mg/kg wet | 0.05000 | | 76 | 40-160 | 7 | 20 | |
| Bromomethane | 0.0463 | 0.0100 | mg/kg wet | 0.05000 | | 93 | 40-160 | 4 | 20 | |
| Carbon Disulfide | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 4 | 20 | |
| Carbon Tetrachloride | 0.0467 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 5 | 20 | |
| Chlorobenzene | 0.0484 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 4 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40605 - 5035** | | | | | | | | | | |
| Chloroethane | 0.0465 | 0.0100 | mg/kg wet | 0.05000 | | 93 | 40-160 | 5 | 20 | |
| Chloroform | 0.0484 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 4 | 20 | |
| Chloromethane | 0.0423 | 0.0100 | mg/kg wet | 0.05000 | | 85 | 40-160 | 4 | 20 | |
| cis-1,2-Dichloroethene | 0.0480 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 5 | 20 | |
| cis-1,3-Dichloropropene | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 40-160 | 5 | 20 | |
| Dibromochloromethane | 0.0468 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 40-160 | 5 | 20 | |
| Dibromomethane | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| Dichlorodifluoromethane | 0.0280 | 0.0100 | mg/kg wet | 0.05000 | | 56 | 40-160 | 7 | 20 | |
| Diethyl Ether | 0.0511 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 5 | 20 | |
| Di-isopropyl ether | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 4 | 20 | |
| Ethyl tertiary-butyl ether | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 5 | 20 | |
| Ethylbenzene | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| Hexachlorobutadiene | 0.0460 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 40-160 | 2 | 20 | |
| Isopropylbenzene | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 2 | 20 | |
| Methyl tert-Butyl Ether | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| Methylene Chloride | 0.0439 | 0.0250 | mg/kg wet | 0.05000 | | 88 | 70-130 | 3 | 20 | |
| Naphthalene | 0.0473 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 40-160 | 5 | 20 | |
| n-Butylbenzene | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| n-Propylbenzene | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 2 | 20 | |
| sec-Butylbenzene | 0.0463 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 2 | 20 | |
| Styrene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 40-160 | 4 | 20 | |
| tert-Butylbenzene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 2 | 20 | |
| Tertiary-amyl methyl ether | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 6 | 20 | |
| Tetrachloroethene | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 5 | 20 | |
| Tetrahydrofuran | 0.0469 | 0.0200 | mg/kg wet | 0.05000 | | 94 | 70-130 | 14 | 20 | |
| Toluene | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 4 | 20 | |
| trans-1,2-Dichloroethene | 0.0464 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 6 | 20 | |
| trans-1,3-Dichloropropene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| Trichloroethene | 0.0462 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 4 | 20 | |
| Trichlorofluoromethane | 0.0445 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 40-160 | 5 | 20 | |
| Vinyl Chloride | 0.0423 | 0.0100 | mg/kg wet | 0.05000 | | 85 | 70-130 | 6 | 20 | |
| Xylene O | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 3 | 20 | |
| Xylene P,M | 0.101 | 0.0100 | mg/kg wet | 0.1000 | | 101 | 70-130 | 3 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0495* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0492* | | mg/kg wet | *0.05000* | | *98* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0493* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0508* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **Batch DE40717 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40717 - 5035** | | | | | | | | | | |
| 1,1-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dioxane | ND | 0.100 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Acetone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromoform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Carbon Disulfide | ND | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Chloroform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromomethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40717 - 5035** | | | | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methylene Chloride | ND | 0.0250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.0050 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 0.0200 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.0100 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.0050 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.0100 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0534* | | mg/kg wet | *0.05000* | | *107* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0496* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0507* | | mg/kg wet | *0.05000* | | *101* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0515* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0521 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| 1,1,1-Trichloroethane | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 40-160 | | | |
| 1,1,2-Trichloroethane | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| 1,1-Dichloroethane | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| 1,1-Dichloroethene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| 1,1-Dichloropropene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| 1,2,3-Trichloropropane | 0.0448 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 0.0526 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0441 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | | | |
| 1,2-Dibromoethane | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| 1,2-Dichlorobenzene | 0.0491 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| 1,2-Dichloroethane | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,2-Dichloropropane | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0521 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| 1,3-Dichlorobenzene | 0.0511 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,3-Dichloropropane | 0.0526 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40717 - 5035** | | | | | | | | | | |
| 1,4-Dichlorobenzene | 0.0493 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,4-Dioxane | 0.941 | 0.100 | mg/kg wet | 1.000 | | 94 | 70-130 | | | |
| 2,2-Dichloropropane | 0.0524 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| 2-Butanone | 0.288 | 0.0500 | mg/kg wet | 0.2500 | | 115 | 40-160 | | | |
| 2-Chlorotoluene | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 2-Hexanone | 0.285 | 0.0500 | mg/kg wet | 0.2500 | | 114 | 40-160 | | | |
| 4-Chlorotoluene | 0.0514 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 4-Isopropyltoluene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 0.246 | 0.0500 | mg/kg wet | 0.2500 | | 98 | 40-160 | | | |
| Acetone | 0.363 | 0.0500 | mg/kg wet | 0.2500 | | 145 | 40-160 | | | |
| Benzene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| Bromobenzene | 0.0511 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Bromochloromethane | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Bromodichloromethane | 0.0591 | 0.0050 | mg/kg wet | 0.05000 | | 118 | 70-130 | | | |
| Bromoform | 0.0404 | 0.0050 | mg/kg wet | 0.05000 | | 81 | 40-160 | | | |
| Bromomethane | 0.0480 | 0.0100 | mg/kg wet | 0.05000 | | 96 | 40-160 | | | |
| Carbon Disulfide | 0.0546 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | | | |
| Carbon Tetrachloride | 0.0519 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Chlorobenzene | 0.0517 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Chloroethane | 0.0509 | 0.0100 | mg/kg wet | 0.05000 | | 102 | 40-160 | | | |
| Chloroform | 0.0521 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Chloromethane | 0.0461 | 0.0100 | mg/kg wet | 0.05000 | | 92 | 40-160 | | | |
| cis-1,2-Dichloroethene | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| cis-1,3-Dichloropropene | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 40-160 | | | |
| Dibromochloromethane | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 40-160 | | | |
| Dibromomethane | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Dichlorodifluoromethane | 0.0323 | 0.0100 | mg/kg wet | 0.05000 | | 65 | 40-160 | | | |
| Diethyl Ether | 0.0532 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Di-isopropyl ether | 0.0553 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 0.0533 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| Ethylbenzene | 0.0520 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Hexachlorobutadiene | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 40-160 | | | |
| Isopropylbenzene | 0.0568 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | | | |
| Methyl tert-Butyl Ether | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Methylene Chloride | 0.0475 | 0.0250 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| Naphthalene | 0.0479 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 40-160 | | | |
| n-Butylbenzene | 0.0520 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| n-Propylbenzene | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| sec-Butylbenzene | 0.0489 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Styrene | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 40-160 | | | |
| tert-Butylbenzene | 0.0510 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Tertiary-amyl methyl ether | 0.0528 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Tetrachloroethene | 0.0439 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | | | |
| Tetrahydrofuran | 0.0505 | 0.0200 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Toluene | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40717 - 5035** | | | | | | | | | | |
| trans-1,2-Dichloroethene | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| trans-1,3-Dichloropropene | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Trichloroethene | 0.0493 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| Trichlorofluoromethane | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 40-160 | | | |
| Vinyl Chloride | 0.0470 | 0.0100 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| Xylene O | 0.0532 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Xylene P,M | 0.108 | 0.0100 | mg/kg wet | 0.1000 | | 108 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0511* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0499* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0505* | | mg/kg wet | *0.05000* | | *101* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0517* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0527 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 1 | 20 | |
| 1,1,1-Trichloroethane | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 4 | 20 | |
| 1,1,2,2-Tetrachloroethane | 0.0491 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 40-160 | 2 | 20 | |
| 1,1,2-Trichloroethane | 0.0529 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 2 | 20 | |
| 1,1-Dichloroethane | 0.0517 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 3 | 20 | |
| 1,1-Dichloroethene | 0.0522 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 4 | 20 | |
| 1,1-Dichloropropene | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 3 | 20 | |
| 1,2,3-Trichlorobenzene | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 3 | 20 | |
| 1,2,3-Trichloropropane | 0.0438 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | 2 | 20 | |
| 1,2,4-Trichlorobenzene | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 4 | 20 | |
| 1,2,4-Trimethylbenzene | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 3 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 0.0435 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 70-130 | 1 | 20 | |
| 1,2-Dibromoethane | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 3 | 20 | |
| 1,2-Dichlorobenzene | 0.0475 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 3 | 20 | |
| 1,2-Dichloroethane | 0.0521 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 2 | 20 | |
| 1,2-Dichloropropane | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 4 | 20 | |
| 1,3,5-Trimethylbenzene | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 3 | 20 | |
| 1,3-Dichlorobenzene | 0.0483 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 6 | 20 | |
| 1,3-Dichloropropane | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 2 | 20 | |
| 1,4-Dichlorobenzene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 2 | 20 | |
| 1,4-Dioxane | 1.02 | 0.100 | mg/kg wet | 1.000 | | 102 | 70-130 | 8 | 20 | |
| 2,2-Dichloropropane | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 3 | 20 | |
| 2-Butanone | 0.310 | 0.0500 | mg/kg wet | 0.2500 | | 124 | 40-160 | 7 | 20 | |
| 2-Chlorotoluene | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 2 | 20 | |
| 2-Hexanone | 0.306 | 0.0500 | mg/kg wet | 0.2500 | | 123 | 40-160 | 7 | 20 | |
| 4-Chlorotoluene | 0.0492 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 4 | 20 | |
| 4-Isopropyltoluene | 0.0481 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 3 | 20 | |
| 4-Methyl-2-Pentanone | 0.266 | 0.0500 | mg/kg wet | 0.2500 | | 106 | 40-160 | 8 | 20 | |
| Acetone | 0.399 | 0.0500 | mg/kg wet | 0.2500 | | 160 | 40-160 | 10 | 20 | |
| Benzene | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 3 | 20 | |
| Bromobenzene | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 4 | 20 | |
| Bromochloromethane | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 0.6 | 20 | |
| Bromodichloromethane | 0.0613 | 0.0050 | mg/kg wet | 0.05000 | | 123 | 70-130 | 4 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40717 - 5035** | | | | | | | | | | |
| Bromoform | 0.0414 | 0.0050 | mg/kg wet | 0.05000 | | 83 | 40-160 | 2 | 20 | |
| Bromomethane | 0.0502 | 0.0100 | mg/kg wet | 0.05000 | | 100 | 40-160 | 5 | 20 | |
| Carbon Disulfide | 0.0569 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | 4 | 20 | |
| Carbon Tetrachloride | 0.0532 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 2 | 20 | |
| Chlorobenzene | 0.0526 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 2 | 20 | |
| Chloroethane | 0.0526 | 0.0100 | mg/kg wet | 0.05000 | | 105 | 40-160 | 3 | 20 | |
| Chloroform | 0.0534 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 3 | 20 | |
| Chloromethane | 0.0479 | 0.0100 | mg/kg wet | 0.05000 | | 96 | 40-160 | 4 | 20 | |
| cis-1,2-Dichloroethene | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 3 | 20 | |
| cis-1,3-Dichloropropene | 0.0555 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 40-160 | 3 | 20 | |
| Dibromochloromethane | 0.0497 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 40-160 | 1 | 20 | |
| Dibromomethane | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 5 | 20 | |
| Dichlorodifluoromethane | 0.0319 | 0.0100 | mg/kg wet | 0.05000 | | 64 | 40-160 | 1 | 20 | |
| Diethyl Ether | 0.0558 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 5 | 20 | |
| Di-isopropyl ether | 0.0572 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | 3 | 20 | |
| Ethyl tertiary-butyl ether | 0.0552 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 4 | 20 | |
| Ethylbenzene | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 2 | 20 | |
| Hexachlorobutadiene | 0.0469 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 40-160 | 4 | 20 | |
| Isopropylbenzene | 0.0553 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | 3 | 20 | |
| Methyl tert-Butyl Ether | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 4 | 20 | |
| Methylene Chloride | 0.0485 | 0.0250 | mg/kg wet | 0.05000 | | 97 | 70-130 | 2 | 20 | |
| Naphthalene | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 40-160 | 1 | 20 | |
| n-Butylbenzene | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 3 | 20 | |
| n-Propylbenzene | 0.0519 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 2 | 20 | |
| sec-Butylbenzene | 0.0472 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 4 | 20 | |
| Styrene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 40-160 | 1 | 20 | |
| tert-Butylbenzene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 3 | 20 | |
| Tertiary-amyl methyl ether | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 4 | 20 | |
| Tetrachloroethene | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 15 | 20 | |
| Tetrahydrofuran | 0.0544 | 0.0200 | mg/kg wet | 0.05000 | | 109 | 70-130 | 7 | 20 | |
| Toluene | 0.0524 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 3 | 20 | |
| trans-1,2-Dichloroethene | 0.0525 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 3 | 20 | |
| trans-1,3-Dichloropropene | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 3 | 20 | |
| Trichloroethene | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 4 | 20 | |
| Trichlorofluoromethane | 0.0510 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 40-160 | 4 | 20 | |
| Vinyl Chloride | 0.0486 | 0.0100 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| Xylene O | 0.0545 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 2 | 20 | |
| Xylene P,M | 0.110 | 0.0100 | mg/kg wet | 0.1000 | | 110 | 70-130 | 2 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0520* | | mg/kg wet | *0.05000* | | *104* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0505* | | mg/kg wet | *0.05000* | | *101* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0509* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0510* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **Batch DE40817 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40817 - 5035** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dioxane | ND | 0.100 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Acetone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromoform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Carbon Disulfide | ND | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Chloroform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromomethane | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40817 - 5035** | | | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methylene Chloride | ND | 0.0250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.0050 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 0.0200 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.0100 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.0050 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.0100 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0545* | | mg/kg wet | *0.05000* | | *109* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0484* | | mg/kg wet | *0.05000* | | *97* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0513* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0509* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0514 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,1,1-Trichloroethane | 0.0525 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 40-160 | | | |
| 1,1,2-Trichloroethane | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| 1,1-Dichloroethane | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,1-Dichloroethene | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,1-Dichloropropene | 0.0510 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 0.0476 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| 1,2,3-Trichloropropane | 0.0449 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0495 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0451 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| 1,2-Dibromoethane | 0.0514 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,2-Dichlorobenzene | 0.0467 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40817 - 5035** | | | | | | | | | | |
| 1,2-Dichloroethane | 0.0525 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| 1,2-Dichloropropane | 0.0524 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,3-Dichlorobenzene | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| 1,3-Dichloropropane | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| 1,4-Dichlorobenzene | 0.0478 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| 1,4-Dioxane | 1.03 | 0.100 | mg/kg wet | 1.000 | | 103 | 70-130 | | | |
| 2,2-Dichloropropane | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| 2-Butanone | 0.316 | 0.0500 | mg/kg wet | 0.2500 | | 126 | 40-160 | | | |
| 2-Chlorotoluene | 0.0492 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| 2-Hexanone | 0.306 | 0.0500 | mg/kg wet | 0.2500 | | 123 | 40-160 | | | |
| 4-Chlorotoluene | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| 4-Isopropyltoluene | 0.0475 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 0.276 | 0.0500 | mg/kg wet | 0.2500 | | 110 | 40-160 | | | |
| Acetone | 0.406 | 0.0500 | mg/kg wet | 0.2500 | | 162 | 40-160 | | | B+ |
| Benzene | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Bromobenzene | 0.0484 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| Bromochloromethane | 0.0512 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Bromodichloromethane | 0.0602 | 0.0050 | mg/kg wet | 0.05000 | | 120 | 70-130 | | | |
| Bromoform | 0.0412 | 0.0050 | mg/kg wet | 0.05000 | | 82 | 40-160 | | | |
| Bromomethane | 0.0486 | 0.0100 | mg/kg wet | 0.05000 | | 97 | 40-160 | | | |
| Carbon Disulfide | 0.0559 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | | | |
| Carbon Tetrachloride | 0.0529 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Chlorobenzene | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Chloroethane | 0.0512 | 0.0100 | mg/kg wet | 0.05000 | | 102 | 40-160 | | | |
| Chloroform | 0.0532 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Chloromethane | 0.0481 | 0.0100 | mg/kg wet | 0.05000 | | 96 | 40-160 | | | |
| cis-1,2-Dichloroethene | 0.0525 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| cis-1,3-Dichloropropene | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 40-160 | | | |
| Dibromochloromethane | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 40-160 | | | |
| Dibromomethane | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Dichlorodifluoromethane | 0.0336 | 0.0100 | mg/kg wet | 0.05000 | | 67 | 40-160 | | | |
| Diethyl Ether | 0.0553 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| Di-isopropyl ether | 0.0563 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Ethylbenzene | 0.0517 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Hexachlorobutadiene | 0.0461 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 40-160 | | | |
| Isopropylbenzene | 0.0535 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| Methyl tert-Butyl Ether | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| Methylene Chloride | 0.0479 | 0.0250 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Naphthalene | 0.0465 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 40-160 | | | |
| n-Butylbenzene | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| n-Propylbenzene | 0.0510 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| sec-Butylbenzene | 0.0467 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |
| Styrene | 0.0512 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 40-160 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40817 - 5035** | | | | | | | | | | |
| tert-Butylbenzene | 0.0484 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| Tertiary-amyl methyl ether | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| Tetrachloroethene | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| Tetrahydrofuran | 0.0577 | 0.0200 | mg/kg wet | 0.05000 | | 115 | 70-130 | | | |
| Toluene | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| trans-1,2-Dichloroethene | 0.0517 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| trans-1,3-Dichloropropene | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Trichloroethene | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Trichlorofluoromethane | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 40-160 | | | |
| Vinyl Chloride | 0.0482 | 0.0100 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Xylene O | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Xylene P,M | 0.107 | 0.0100 | mg/kg wet | 0.1000 | | 107 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0532* | | mg/kg wet | *0.05000* | | *106* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0510* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0520* | | mg/kg wet | *0.05000* | | *104* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0509* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0535 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 4 | 20 | |
| 1,1,1-Trichloroethane | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 2 | 20 | |
| 1,1,2,2-Tetrachloroethane | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 40-160 | 2 | 20 | |
| 1,1,2-Trichloroethane | 0.0544 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 2 | 20 | |
| 1,1-Dichloroethane | 0.0520 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 1 | 20 | |
| 1,1-Dichloroethene | 0.0521 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 0.9 | 20 | |
| 1,1-Dichloropropene | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 0.3 | 20 | |
| 1,2,3-Trichlorobenzene | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 1 | 20 | |
| 1,2,3-Trichloropropane | 0.0444 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | 1 | 20 | |
| 1,2,4-Trichlorobenzene | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 4 | 20 | |
| 1,2,4-Trimethylbenzene | 0.0473 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 5 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 0.0454 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | 0.6 | 20 | |
| 1,2-Dibromoethane | 0.0534 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 4 | 20 | |
| 1,2-Dichlorobenzene | 0.0450 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | 4 | 20 | |
| 1,2-Dichloroethane | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 2 | 20 | |
| 1,2-Dichloropropane | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 3 | 20 | |
| 1,3,5-Trimethylbenzene | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 4 | 20 | |
| 1,3-Dichlorobenzene | 0.0476 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 3 | 20 | |
| 1,3-Dichloropropane | 0.0558 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 4 | 20 | |
| 1,4-Dichlorobenzene | 0.0464 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 3 | 20 | |
| 1,4-Dioxane | 1.12 | 0.100 | mg/kg wet | 1.000 | | 112 | 70-130 | 9 | 20 | |
| 2,2-Dichloropropane | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 0.04 | 20 | |
| 2-Butanone | 0.332 | 0.0500 | mg/kg wet | 0.2500 | | 133 | 40-160 | 5 | 20 | |
| 2-Chlorotoluene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 0.4 | 20 | |
| 2-Hexanone | 0.332 | 0.0500 | mg/kg wet | 0.2500 | | 133 | 40-160 | 8 | 20 | |
| 4-Chlorotoluene | 0.0466 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 4 | 20 | |
| 4-Isopropyltoluene | 0.0449 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | 6 | 20 | |
| 4-Methyl-2-Pentanone | 0.288 | 0.0500 | mg/kg wet | 0.2500 | | 115 | 40-160 | 4 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40817 - 5035** | | | | | | | | | | |
| Acetone | 0.435 | 0.0500 | mg/kg wet | 0.2500 | | 174 | 40-160 | 7 | 20 | B+ |
| Benzene | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 2 | 20 | |
| Bromobenzene | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 3 | 20 | |
| Bromochloromethane | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 2 | 20 | |
| Bromodichloromethane | 0.0622 | 0.0050 | mg/kg wet | 0.05000 | | 124 | 70-130 | 3 | 20 | |
| Bromoform | 0.0432 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 40-160 | 5 | 20 | |
| Bromomethane | 0.0499 | 0.0100 | mg/kg wet | 0.05000 | | 100 | 40-160 | 3 | 20 | |
| Carbon Disulfide | 0.0564 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | 1 | 20 | |
| Carbon Tetrachloride | 0.0533 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 0.8 | 20 | |
| Chlorobenzene | 0.0525 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 2 | 20 | |
| Chloroethane | 0.0514 | 0.0100 | mg/kg wet | 0.05000 | | 103 | 40-160 | 0.3 | 20 | |
| Chloroform | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 1 | 20 | |
| Chloromethane | 0.0478 | 0.0100 | mg/kg wet | 0.05000 | | 96 | 40-160 | 0.7 | 20 | |
| cis-1,2-Dichloroethene | 0.0534 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 2 | 20 | |
| cis-1,3-Dichloropropene | 0.0563 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 40-160 | 3 | 20 | |
| Dibromochloromethane | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 40-160 | 5 | 20 | |
| Dibromomethane | 0.0548 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 3 | 20 | |
| Dichlorodifluoromethane | 0.0319 | 0.0100 | mg/kg wet | 0.05000 | | 64 | 40-160 | 5 | 20 | |
| Diethyl Ether | 0.0570 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | 3 | 20 | |
| Di-isopropyl ether | 0.0580 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | 3 | 20 | |
| Ethyl tertiary-butyl ether | 0.0560 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 4 | 20 | |
| Ethylbenzene | 0.0524 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 1 | 20 | |
| Hexachlorobutadiene | 0.0443 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 40-160 | 4 | 20 | |
| Isopropylbenzene | 0.0519 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 3 | 20 | |
| Methyl tert-Butyl Ether | 0.0545 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 4 | 20 | |
| Methylene Chloride | 0.0484 | 0.0250 | mg/kg wet | 0.05000 | | 97 | 70-130 | 1 | 20 | |
| Naphthalene | 0.0463 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 40-160 | 0.3 | 20 | |
| n-Butylbenzene | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 6 | 20 | |
| n-Propylbenzene | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 4 | 20 | |
| sec-Butylbenzene | 0.0442 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | 5 | 20 | |
| Styrene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 40-160 | 2 | 20 | |
| tert-Butylbenzene | 0.0461 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 5 | 20 | |
| Tertiary-amyl methyl ether | 0.0562 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 5 | 20 | |
| Tetrachloroethene | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 7 | 20 | |
| Tetrahydrofuran | 0.0598 | 0.0200 | mg/kg wet | 0.05000 | | 120 | 70-130 | 4 | 20 | |
| Toluene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 2 | 20 | |
| trans-1,2-Dichloroethene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 1 | 20 | |
| trans-1,3-Dichloropropene | 0.0543 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 2 | 20 | |
| Trichloroethene | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 1 | 20 | |
| Trichlorofluoromethane | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 40-160 | 0.4 | 20 | |
| Vinyl Chloride | 0.0481 | 0.0100 | mg/kg wet | 0.05000 | | 96 | 70-130 | 0.2 | 20 | |
| Xylene O | 0.0540 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 2 | 20 | |
| Xylene P,M | 0.109 | 0.0100 | mg/kg wet | 0.1000 | | 109 | 70-130 | 2 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0538* | | mg/kg wet | *0.05000* | | *108* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0520* | | mg/kg wet | *0.05000* | | *104* | *70-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40817 - 5035** | | | | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *0.0524* | | mg/kg wet | *0.05000* | | *105* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0518* | | mg/kg wet | *0.05000* | | *104* | *70-130* | | | |
| **Batch DE40926 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dioxane | ND | 0.100 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Acetone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromoform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Carbon Disulfide | ND | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Chloroform | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40926 - 5035** | | | | | | | | | | |
| Chloromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromomethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methylene Chloride | ND | 0.0250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.0050 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 0.0200 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.0100 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.0050 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.0100 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0556* | | mg/kg wet | *0.05000* | | *111* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0487* | | mg/kg wet | *0.05000* | | *97* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0525* | | mg/kg wet | *0.05000* | | *105* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0510* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| 1,1,1-Trichloroethane | 0.0546 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 0.0569 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 40-160 | | | |
| 1,1,2-Trichloroethane | 0.0567 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | | | |
| 1,1-Dichloroethane | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| 1,1-Dichloroethene | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| 1,1-Dichloropropene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| 1,2,3-Trichloropropane | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40926 - 5035** | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 0.0562 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,2-Dibromoethane | 0.0558 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | | | |
| 1,2-Dichlorobenzene | 0.0524 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| 1,2-Dichloroethane | 0.0556 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| 1,2-Dichloropropane | 0.0552 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0545 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | | | |
| 1,3-Dichlorobenzene | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| 1,3-Dichloropropane | 0.0578 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | | | |
| 1,4-Dichlorobenzene | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| 1,4-Dioxane | 1.11 | 0.100 | mg/kg wet | 1.000 | | 111 | 70-130 | | | |
| 2,2-Dichloropropane | 0.0554 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| 2-Butanone | 0.337 | 0.0500 | mg/kg wet | 0.2500 | | 135 | 40-160 | | | |
| 2-Chlorotoluene | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| 2-Hexanone | 0.344 | 0.0500 | mg/kg wet | 0.2500 | | 138 | 40-160 | | | |
| 4-Chlorotoluene | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| 4-Isopropyltoluene | 0.0517 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 0.295 | 0.0500 | mg/kg wet | 0.2500 | | 118 | 40-160 | | | |
| Acetone | 0.436 | 0.0500 | mg/kg wet | 0.2500 | | 174 | 40-160 | | | B+ |
| Benzene | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Bromobenzene | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Bromochloromethane | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Bromodichloromethane | 0.0639 | 0.0050 | mg/kg wet | 0.05000 | | 128 | 70-130 | | | |
| Bromoform | 0.0441 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 40-160 | | | |
| Bromomethane | 0.0505 | 0.0100 | mg/kg wet | 0.05000 | | 101 | 40-160 | | | |
| Carbon Disulfide | 0.0573 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | | | |
| Carbon Tetrachloride | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| Chlorobenzene | 0.0547 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | | | |
| Chloroethane | 0.0529 | 0.0100 | mg/kg wet | 0.05000 | | 106 | 40-160 | | | |
| Chloroform | 0.0554 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| Chloromethane | 0.0490 | 0.0100 | mg/kg wet | 0.05000 | | 98 | 40-160 | | | |
| cis-1,2-Dichloroethene | 0.0552 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| cis-1,3-Dichloropropene | 0.0582 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 40-160 | | | |
| Dibromochloromethane | 0.0534 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 40-160 | | | |
| Dibromomethane | 0.0566 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | | | |
| Dichlorodifluoromethane | 0.0335 | 0.0100 | mg/kg wet | 0.05000 | | 67 | 40-160 | | | |
| Diethyl Ether | 0.0593 | 0.0050 | mg/kg wet | 0.05000 | | 119 | 70-130 | | | |
| Di-isopropyl ether | 0.0597 | 0.0050 | mg/kg wet | 0.05000 | | 119 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 0.0579 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | | | |
| Ethylbenzene | 0.0543 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | | | |
| Hexachlorobutadiene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 40-160 | | | |
| Isopropylbenzene | 0.0585 | 0.0050 | mg/kg wet | 0.05000 | | 117 | 70-130 | | | |
| Methyl tert-Butyl Ether | 0.0563 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | | | |
| Methylene Chloride | 0.0504 | 0.0250 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40926 - 5035** | | | | | | | | | | |
| Naphthalene | 0.0526 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 40-160 | | | |
| n-Butylbenzene | 0.0541 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| n-Propylbenzene | 0.0556 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| sec-Butylbenzene | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Styrene | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 40-160 | | | |
| tert-Butylbenzene | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Tertiary-amyl methyl ether | 0.0577 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | | | |
| Tetrachloroethene | 0.0454 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| Tetrahydrofuran | 0.0604 | 0.0200 | mg/kg wet | 0.05000 | | 121 | 70-130 | | | |
| Toluene | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| trans-1,2-Dichloroethene | 0.0533 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| trans-1,3-Dichloropropene | 0.0567 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | | | |
| Trichloroethene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| Trichlorofluoromethane | 0.0519 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 40-160 | | | |
| Vinyl Chloride | 0.0489 | 0.0100 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Xylene O | 0.0568 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | | | |
| Xylene P,M | 0.114 | 0.0100 | mg/kg wet | 0.1000 | | 114 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0548* | | mg/kg wet | *0.05000* | | *110* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0510* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0533* | | mg/kg wet | *0.05000* | | *107* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0526* | | mg/kg wet | *0.05000* | | *105* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 0 | 20 | |
| 1,1,1-Trichloroethane | 0.0544 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 0.5 | 20 | |
| 1,1,2,2-Tetrachloroethane | 0.0495 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 40-160 | 14 | 20 | |
| 1,1,2-Trichloroethane | 0.0556 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | 2 | 20 | |
| 1,1-Dichloroethane | 0.0532 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 0.1 | 20 | |
| 1,1-Dichloroethene | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 0.08 | 20 | |
| 1,1-Dichloropropene | 0.0522 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 0.1 | 20 | |
| 1,2,3-Trichlorobenzene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 10 | 20 | |
| 1,2,3-Trichloropropane | 0.0443 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | 13 | 20 | |
| 1,2,4-Trichlorobenzene | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 12 | 20 | |
| 1,2,4-Trimethylbenzene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 10 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 0.0440 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | 15 | 20 | |
| 1,2-Dibromoethane | 0.0532 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 5 | 20 | |
| 1,2-Dichlorobenzene | 0.0471 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 11 | 20 | |
| 1,2-Dichloroethane | 0.0548 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 1 | 20 | |
| 1,2-Dichloropropane | 0.0550 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 0.4 | 20 | |
| 1,3,5-Trimethylbenzene | 0.0496 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 9 | 20 | |
| 1,3-Dichlorobenzene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 11 | 20 | |
| 1,3-Dichloropropane | 0.0562 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 3 | 20 | |
| 1,4-Dichlorobenzene | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 11 | 20 | |
| 1,4-Dioxane | 1.02 | 0.100 | mg/kg wet | 1.000 | | 102 | 70-130 | 8 | 20 | |
| 2,2-Dichloropropane | 0.0550 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 0.7 | 20 | |
| 2-Butanone | 0.320 | 0.0500 | mg/kg wet | 0.2500 | | 128 | 40-160 | 5 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40926 - 5035** | | | | | | | | | | |
| 2-Chlorotoluene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 9 | 20 | |
| 2-Hexanone | 0.319 | 0.0500 | mg/kg wet | 0.2500 | | 127 | 40-160 | 8 | 20 | |
| 4-Chlorotoluene | 0.0489 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 9 | 20 | |
| 4-Isopropyltoluene | 0.0472 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 9 | 20 | |
| 4-Methyl-2-Pentanone | 0.275 | 0.0500 | mg/kg wet | 0.2500 | | 110 | 40-160 | 7 | 20 | |
| Acetone | 0.413 | 0.0500 | mg/kg wet | 0.2500 | | 165 | 40-160 | 6 | 20 | B+ |
| Benzene | 0.0524 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 1 | 20 | |
| Bromobenzene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 9 | 20 | |
| Bromochloromethane | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 0.04 | 20 | |
| Bromodichloromethane | 0.0632 | 0.0050 | mg/kg wet | 0.05000 | | 126 | 70-130 | 1 | 20 | |
| Bromoform | 0.0427 | 0.0050 | mg/kg wet | 0.05000 | | 85 | 40-160 | 3 | 20 | |
| Bromomethane | 0.0496 | 0.0100 | mg/kg wet | 0.05000 | | 99 | 40-160 | 2 | 20 | |
| Carbon Disulfide | 0.0569 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | 0.7 | 20 | |
| Carbon Tetrachloride | 0.0546 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 0.6 | 20 | |
| Chlorobenzene | 0.0533 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 3 | 20 | |
| Chloroethane | 0.0519 | 0.0100 | mg/kg wet | 0.05000 | | 104 | 40-160 | 2 | 20 | |
| Chloroform | 0.0552 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 0.3 | 20 | |
| Chloromethane | 0.0478 | 0.0100 | mg/kg wet | 0.05000 | | 96 | 40-160 | 2 | 20 | |
| cis-1,2-Dichloroethene | 0.0546 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 1 | 20 | |
| cis-1,3-Dichloropropene | 0.0576 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 40-160 | 1 | 20 | |
| Dibromochloromethane | 0.0521 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 40-160 | 2 | 20 | |
| Dibromomethane | 0.0551 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 3 | 20 | |
| Dichlorodifluoromethane | 0.0316 | 0.0100 | mg/kg wet | 0.05000 | | 63 | 40-160 | 6 | 20 | |
| Diethyl Ether | 0.0579 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | 2 | 20 | |
| Di-isopropyl ether | 0.0593 | 0.0050 | mg/kg wet | 0.05000 | | 119 | 70-130 | 0.6 | 20 | |
| Ethyl tertiary-butyl ether | 0.0576 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | 0.6 | 20 | |
| Ethylbenzene | 0.0538 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 1 | 20 | |
| Hexachlorobutadiene | 0.0459 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 40-160 | 9 | 20 | |
| Isopropylbenzene | 0.0544 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 7 | 20 | |
| Methyl tert-Butyl Ether | 0.0552 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 2 | 20 | |
| Methylene Chloride | 0.0498 | 0.0250 | mg/kg wet | 0.05000 | | 100 | 70-130 | 1 | 20 | |
| Naphthalene | 0.0467 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 40-160 | 12 | 20 | |
| n-Butylbenzene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 9 | 20 | |
| n-Propylbenzene | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 9 | 20 | |
| sec-Butylbenzene | 0.0465 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 9 | 20 | |
| Styrene | 0.0533 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 40-160 | 3 | 20 | |
| tert-Butylbenzene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 9 | 20 | |
| Tertiary-amyl methyl ether | 0.0574 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | 0.6 | 20 | |
| Tetrachloroethene | 0.0497 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 9 | 20 | |
| Tetrahydrofuran | 0.0565 | 0.0200 | mg/kg wet | 0.05000 | | 113 | 70-130 | 7 | 20 | |
| Toluene | 0.0534 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 0.9 | 20 | |
| trans-1,2-Dichloroethene | 0.0534 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 0.1 | 20 | |
| trans-1,3-Dichloropropene | 0.0562 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 0.9 | 20 | |
| Trichloroethene | 0.0522 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 0.3 | 20 | |
| Trichlorofluoromethane | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 40-160 | 1 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DE40926 - 5035** | | | | | | | | | | |
| Vinyl Chloride | 0.0480 | 0.0100 | mg/kg wet | 0.05000 | | 96 | 70-130 | 2 | 20 | |
| Xylene O | 0.0550 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 3 | 20 | |
| Xylene P,M | 0.111 | 0.0100 | mg/kg wet | 0.1000 | | 111 | 70-130 | 2 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0544* | | mg/kg wet | *0.05000* | | *109* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0514* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0534* | | mg/kg wet | *0.05000* | | *107* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0514* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40356 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40356 - 3546** | | | | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyridine | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.76* | | mg/kg wet | *2.500* | | *111* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.80* | | mg/kg wet | *3.750* | | *128* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *4.31* | | mg/kg wet | *3.750* | | *115* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.98* | | mg/kg wet | *2.500* | | *119* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *4.45* | | mg/kg wet | *3.750* | | *119* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.98* | | mg/kg wet | *2.500* | | *119* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *4.35* | | mg/kg wet | *3.750* | | *116* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *3.72* | | mg/kg wet | *2.500* | | *149* | *30-130* | | | S+ |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.56 | 0.025 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| 1,2-Dichlorobenzene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| 1,3-Dichlorobenzene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 30-130 | | | |
| 2,4-Dichlorophenol | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 30-130 | | | |
| 2,4-Dimethylphenol | 3.87 | 0.250 | mg/kg wet | 2.500 | | 155 | 30-130 | | | B+ |
| 2,4-Dinitrophenol | 1.60 | 1.00 | mg/kg wet | 2.500 | | 64 | 15-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40356 - 3546** | | | | | | | | | | |
| 2,4-Dinitrotoluene | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| 2-Chloronaphthalene | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | | | |
| 2-Chlorophenol | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 30-130 | | | |
| 2-Methylnaphthalene | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| 2-Methylphenol | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 15-140 | | | |
| 2-Nitrophenol | 2.24 | 0.500 | mg/kg wet | 2.500 | | 89 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.74 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | | | |
| 3+4-Methylphenol | 4.92 | 0.250 | mg/kg wet | 5.000 | | 98 | 15-140 | | | |
| 4-Bromophenyl-phenylether | 2.91 | 0.250 | mg/kg wet | 2.500 | | 116 | 40-140 | | | |
| 4-Chloroaniline | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 15-140 | | | |
| 4-Nitrophenol | 2.13 | 1.00 | mg/kg wet | 2.500 | | 85 | 15-140 | | | |
| Acenaphthene | 2.59 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | | | |
| Acenaphthylene | 2.66 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| Acetophenone | 2.26 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Aniline | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Anthracene | 2.69 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | | | |
| Azobenzene | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | | | |
| Benzo(a)anthracene | 2.76 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | | | |
| Benzo(a)pyrene | 2.81 | 0.250 | mg/kg wet | 2.500 | | 112 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.65 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.96 | 0.250 | mg/kg wet | 2.500 | | 118 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | | | |
| Butylbenzylphthalate | 2.80 | 0.250 | mg/kg wet | 2.500 | | 112 | 40-140 | | | |
| Chrysene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 3.01 | 0.250 | mg/kg wet | 2.500 | | 120 | 40-140 | | | |
| Dibenzofuran | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Diethylphthalate | 2.61 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Dimethylphthalate | 2.65 | 0.250 | mg/kg wet | 2.500 | | 106 | 15-140 | | | |
| Di-n-butylphthalate | 2.77 | 0.250 | mg/kg wet | 2.500 | | 111 | 40-140 | | | |
| Di-n-octylphthalate | 2.80 | 0.500 | mg/kg wet | 2.500 | | 112 | 40-140 | | | |
| Fluoranthene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Fluorene | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| Hexachlorobenzene | 2.75 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | | | |
| Hexachlorobutadiene | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| Hexachloroethane | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.98 | 0.250 | mg/kg wet | 2.500 | | 119 | 40-140 | | | |
| Isophorone | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Naphthalene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Nitrobenzene | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| N-Nitrosodimethylamine | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40356 - 3546** | | | | | | | | | | |
| Pentachlorophenol | 2.24 | 1.00 | mg/kg wet | 2.500 | | 90 | 15-140 | | | |
| Phenanthrene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Phenol | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 15-140 | | | |
| Pyrene | 2.95 | 0.250 | mg/kg wet | 2.500 | | 118 | 40-140 | | | |
| Pyridine | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.82* | | mg/kg wet | *2.500* | | *113* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *5.30* | | mg/kg wet | *3.750* | | *141* | *30-130* | | | S+ |
| *Surrogate: 2-Chlorophenol-d4* | *4.44* | | mg/kg wet | *3.750* | | *118* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *3.13* | | mg/kg wet | *2.500* | | *125* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *4.56* | | mg/kg wet | *3.750* | | *122* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.78* | | mg/kg wet | *2.500* | | *111* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *4.43* | | mg/kg wet | *3.750* | | *118* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *3.60* | | mg/kg wet | *2.500* | | *144* | *30-130* | | | S+ |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.57 | 0.025 | mg/kg wet | 2.500 | | 103 | 40-140 | 0.6 | 30 | |
| 1,2,4-Trichlorobenzene | 2.29 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 3 | 30 | |
| 1,2-Dichlorobenzene | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 0.5 | 30 | |
| 1,3-Dichlorobenzene | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 1 | 30 | |
| 1,4-Dichlorobenzene | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 0.4 | 30 | |
| 2,4,5-Trichlorophenol | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 30-130 | 3 | 30 | |
| 2,4,6-Trichlorophenol | 2.69 | 0.250 | mg/kg wet | 2.500 | | 108 | 30-130 | 0.9 | 30 | |
| 2,4-Dichlorophenol | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 30-130 | 4 | 30 | |
| 2,4-Dimethylphenol | 3.99 | 0.250 | mg/kg wet | 2.500 | | 160 | 30-130 | 3 | 30 | B+ |
| 2,4-Dinitrophenol | 1.66 | 1.00 | mg/kg wet | 2.500 | | 66 | 15-140 | 4 | 30 | |
| 2,4-Dinitrotoluene | 2.75 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | 5 | 30 | |
| 2,6-Dinitrotoluene | 2.67 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 4 | 30 | |
| 2-Chloronaphthalene | 2.72 | 0.250 | mg/kg wet | 2.500 | | 109 | 40-140 | 2 | 30 | |
| 2-Chlorophenol | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 30-130 | 3 | 30 | |
| 2-Methylnaphthalene | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 3 | 30 | |
| 2-Methylphenol | 2.60 | 0.250 | mg/kg wet | 2.500 | | 104 | 15-140 | 2 | 30 | |
| 2-Nitrophenol | 2.28 | 0.500 | mg/kg wet | 2.500 | | 91 | 30-130 | 2 | 30 | |
| 3,3´-Dichlorobenzidine | 2.79 | 0.250 | mg/kg wet | 2.500 | | 112 | 40-140 | 2 | 30 | |
| 3+4-Methylphenol | 5.09 | 0.250 | mg/kg wet | 5.000 | | 102 | 15-140 | 4 | 30 | |
| 4-Bromophenyl-phenylether | 2.99 | 0.250 | mg/kg wet | 2.500 | | 119 | 40-140 | 3 | 30 | |
| 4-Chloroaniline | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 15-140 | 4 | 30 | |
| 4-Nitrophenol | 2.30 | 1.00 | mg/kg wet | 2.500 | | 92 | 15-140 | 8 | 30 | |
| Acenaphthene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 2 | 30 | |
| Acenaphthylene | 2.72 | 0.250 | mg/kg wet | 2.500 | | 109 | 40-140 | 2 | 30 | |
| Acetophenone | 2.36 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 4 | 30 | |
| Aniline | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 3 | 30 | |
| Anthracene | 2.78 | 0.250 | mg/kg wet | 2.500 | | 111 | 40-140 | 4 | 30 | |
| Azobenzene | 2.73 | 0.250 | mg/kg wet | 2.500 | | 109 | 40-140 | 2 | 30 | |
| Benzo(a)anthracene | 2.83 | 0.250 | mg/kg wet | 2.500 | | 113 | 40-140 | 3 | 30 | |
| Benzo(a)pyrene | 2.87 | 0.250 | mg/kg wet | 2.500 | | 115 | 40-140 | 2 | 30 | |
| Benzo(b)fluoranthene | 2.70 | 0.250 | mg/kg wet | 2.500 | | 108 | 40-140 | 2 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40356 - 3546** | | | | | | | | | | |
| Benzo(g,h,i)perylene | 2.95 | 0.250 | mg/kg wet | 2.500 | | 118 | 40-140 | 0.2 | 30 | |
| Benzo(k)fluoranthene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 3 | 30 | |
| bis(2-Chloroethoxy)methane | 2.26 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 2 | 30 | |
| bis(2-Chloroethyl)ether | 2.36 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 2 | 30 | |
| bis(2-chloroisopropyl)Ether | 2.16 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 2 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.89 | 0.250 | mg/kg wet | 2.500 | | 115 | 40-140 | 7 | 30 | |
| Butylbenzylphthalate | 3.04 | 0.250 | mg/kg wet | 2.500 | | 122 | 40-140 | 8 | 30 | |
| Chrysene | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 2 | 30 | |
| Dibenzo(a,h)Anthracene | 3.11 | 0.250 | mg/kg wet | 2.500 | | 125 | 40-140 | 3 | 30 | |
| Dibenzofuran | 2.59 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 5 | 30 | |
| Diethylphthalate | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 3 | 30 | |
| Dimethylphthalate | 2.71 | 0.250 | mg/kg wet | 2.500 | | 108 | 15-140 | 2 | 30 | |
| Di-n-butylphthalate | 2.87 | 0.250 | mg/kg wet | 2.500 | | 115 | 40-140 | 4 | 30 | |
| Di-n-octylphthalate | 2.99 | 0.500 | mg/kg wet | 2.500 | | 120 | 40-140 | 7 | 30 | |
| Fluoranthene | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 2 | 30 | |
| Fluorene | 2.64 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 3 | 30 | |
| Hexachlorobenzene | 2.81 | 0.250 | mg/kg wet | 2.500 | | 112 | 40-140 | 2 | 30 | |
| Hexachlorobutadiene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 1 | 30 | |
| Hexachloroethane | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 1 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.99 | 0.250 | mg/kg wet | 2.500 | | 120 | 40-140 | 0.2 | 30 | |
| Isophorone | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 2 | 30 | |
| Naphthalene | 2.19 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 0.7 | 30 | |
| Nitrobenzene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 0.9 | 30 | |
| N-Nitrosodimethylamine | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 0.2 | 30 | |
| Pentachlorophenol | 2.28 | 1.00 | mg/kg wet | 2.500 | | 91 | 15-140 | 2 | 30 | |
| Phenanthrene | 2.61 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | 3 | 30 | |
| Phenol | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 15-140 | 4 | 30 | |
| Pyrene | 3.16 | 0.250 | mg/kg wet | 2.500 | | 126 | 40-140 | 7 | 30 | |
| Pyridine | 2.58 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 3 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.80* | | mg/kg wet | *2.500* | | *112* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *5.23* | | mg/kg wet | *3.750* | | *140* | *30-130* | | | S+ |
| *Surrogate: 2-Chlorophenol-d4* | *4.45* | | mg/kg wet | *3.750* | | *119* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *3.07* | | mg/kg wet | *2.500* | | *123* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *4.56* | | mg/kg wet | *3.750* | | *121* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.76* | | mg/kg wet | *2.500* | | *110* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *4.47* | | mg/kg wet | *3.750* | | *119* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *3.84* | | mg/kg wet | *2.500* | | *153* | *30-130* | | | S+ |
| **Batch DE40705 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40705 - 3546** | | | | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40705 - 3546** | | | | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyridine | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.27* | | mg/kg wet | *2.500* | | *91* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.38* | | mg/kg wet | *3.750* | | *117* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.21* | | mg/kg wet | *3.750* | | *86* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.29* | | mg/kg wet | *2.500* | | *92* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.19* | | mg/kg wet | *3.750* | | *85* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.24* | | mg/kg wet | *2.500* | | *89* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.16* | | mg/kg wet | *3.750* | | *84* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.61* | | mg/kg wet | *2.500* | | *104* | *30-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 1.96 | 0.025 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 1.94 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| 1,2-Dichlorobenzene | 1.88 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| 1,3-Dichlorobenzene | 1.91 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| 1,4-Dichlorobenzene | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.36 | 0.250 | mg/kg wet | 2.500 | | 94 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 30-130 | | | |
| 2,4-Dichlorophenol | 1.93 | 0.250 | mg/kg wet | 2.500 | | 77 | 30-130 | | | |
| 2,4-Dimethylphenol | 2.85 | 0.250 | mg/kg wet | 2.500 | | 114 | 30-130 | | | |
| 2,4-Dinitrophenol | 1.94 | 1.00 | mg/kg wet | 2.500 | | 78 | 15-140 | | | |
| 2,4-Dinitrotoluene | 2.50 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| 2-Chloronaphthalene | 2.06 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| 2-Chlorophenol | 1.87 | 0.250 | mg/kg wet | 2.500 | | 75 | 30-130 | | | |
| 2-Methylnaphthalene | 1.88 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| 2-Methylphenol | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 15-140 | | | |
| 2-Nitrophenol | 1.94 | 0.500 | mg/kg wet | 2.500 | | 78 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| 3+4-Methylphenol | 3.95 | 0.250 | mg/kg wet | 5.000 | | 79 | 15-140 | | | |
| 4-Bromophenyl-phenylether | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| 4-Chloroaniline | 1.89 | 0.250 | mg/kg wet | 2.500 | | 76 | 15-140 | | | |
| 4-Nitrophenol | 2.08 | 1.00 | mg/kg wet | 2.500 | | 83 | 15-140 | | | |
| Acenaphthene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Acenaphthylene | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Acetophenone | 1.84 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| Aniline | 1.74 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40705 - 3546** | | | | | | | | | | |
| Anthracene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Azobenzene | 1.82 | 0.250 | mg/kg wet | 2.500 | | 73 | 40-140 | | | |
| Benzo(a)anthracene | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Benzo(a)pyrene | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.16 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 1.60 | 0.250 | mg/kg wet | 2.500 | | 64 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 1.59 | 0.250 | mg/kg wet | 2.500 | | 64 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.59 | 0.250 | mg/kg wet | 2.500 | | 64 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Butylbenzylphthalate | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Chrysene | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Dibenzofuran | 2.14 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Diethylphthalate | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Dimethylphthalate | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 15-140 | | | |
| Di-n-butylphthalate | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Di-n-octylphthalate | 2.08 | 0.500 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Fluoranthene | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| Fluorene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Hexachlorobenzene | 2.58 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | | | |
| Hexachlorobutadiene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Hexachloroethane | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Isophorone | 1.62 | 0.250 | mg/kg wet | 2.500 | | 65 | 40-140 | | | |
| Naphthalene | 1.70 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | | | |
| Nitrobenzene | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| N-Nitrosodimethylamine | 1.79 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Pentachlorophenol | 1.99 | 1.00 | mg/kg wet | 2.500 | | 80 | 15-140 | | | |
| Phenanthrene | 2.16 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Phenol | 1.77 | 0.250 | mg/kg wet | 2.500 | | 71 | 15-140 | | | |
| Pyrene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Pyridine | 1.72 | 0.250 | mg/kg wet | 2.500 | | 69 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.08* | | mg/kg wet | *2.500* | | *83* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.26* | | mg/kg wet | *3.750* | | *114* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.06* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.25* | | mg/kg wet | *2.500* | | *90* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.94* | | mg/kg wet | *3.750* | | *78* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.89* | | mg/kg wet | *2.500* | | *76* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *2.89* | | mg/kg wet | *3.750* | | *77* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.58* | | mg/kg wet | *2.500* | | *103* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.08 | 0.025 | mg/kg wet | 2.500 | | 83 | 40-140 | 6 | 30 | |
| 1,2,4-Trichlorobenzene | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 8 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40705 - 3546** | | | | | | | | | | |
| 1,2-Dichlorobenzene | 1.99 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | 6 | 30 | |
| 1,3-Dichlorobenzene | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 8 | 30 | |
| 1,4-Dichlorobenzene | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 8 | 30 | |
| 2,4,5-Trichlorophenol | 2.56 | 0.250 | mg/kg wet | 2.500 | | 103 | 30-130 | 8 | 30 | |
| 2,4,6-Trichlorophenol | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 30-130 | 6 | 30 | |
| 2,4-Dichlorophenol | 2.02 | 0.250 | mg/kg wet | 2.500 | | 81 | 30-130 | 4 | 30 | |
| 2,4-Dimethylphenol | 3.28 | 0.250 | mg/kg wet | 2.500 | | 131 | 30-130 | 14 | 30 | B+ |
| 2,4-Dinitrophenol | 2.09 | 1.00 | mg/kg wet | 2.500 | | 84 | 15-140 | 7 | 30 | |
| 2,4-Dinitrotoluene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 5 | 30 | |
| 2,6-Dinitrotoluene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 2 | 30 | |
| 2-Chloronaphthalene | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 3 | 30 | |
| 2-Chlorophenol | 1.96 | 0.250 | mg/kg wet | 2.500 | | 79 | 30-130 | 5 | 30 | |
| 2-Methylnaphthalene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 6 | 30 | |
| 2-Methylphenol | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 15-140 | 6 | 30 | |
| 2-Nitrophenol | 2.06 | 0.500 | mg/kg wet | 2.500 | | 83 | 30-130 | 6 | 30 | |
| 3,3´-Dichlorobenzidine | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 3 | 30 | |
| 3+4-Methylphenol | 4.26 | 0.250 | mg/kg wet | 5.000 | | 85 | 15-140 | 7 | 30 | |
| 4-Bromophenyl-phenylether | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 4 | 30 | |
| 4-Chloroaniline | 2.06 | 0.250 | mg/kg wet | 2.500 | | 83 | 15-140 | 9 | 30 | |
| 4-Nitrophenol | 2.18 | 1.00 | mg/kg wet | 2.500 | | 87 | 15-140 | 4 | 30 | |
| Acenaphthene | 2.16 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 3 | 30 | |
| Acenaphthylene | 2.16 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 2 | 30 | |
| Acetophenone | 1.93 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | 5 | 30 | |
| Aniline | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | 12 | 30 | |
| Anthracene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 4 | 30 | |
| Azobenzene | 1.88 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | 3 | 30 | |
| Benzo(a)anthracene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 2 | 30 | |
| Benzo(a)pyrene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 4 | 30 | |
| Benzo(b)fluoranthene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 4 | 30 | |
| Benzo(g,h,i)perylene | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 2 | 30 | |
| Benzo(k)fluoranthene | 2.31 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 5 | 30 | |
| bis(2-Chloroethoxy)methane | 1.72 | 0.250 | mg/kg wet | 2.500 | | 69 | 40-140 | 8 | 30 | |
| bis(2-Chloroethyl)ether | 1.70 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | 6 | 30 | |
| bis(2-chloroisopropyl)Ether | 1.74 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | 9 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 4 | 30 | |
| Butylbenzylphthalate | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 5 | 30 | |
| Chrysene | 2.34 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 3 | 30 | |
| Dibenzo(a,h)Anthracene | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 3 | 30 | |
| Dibenzofuran | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 3 | 30 | |
| Diethylphthalate | 2.36 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 3 | 30 | |
| Dimethylphthalate | 2.31 | 0.250 | mg/kg wet | 2.500 | | 93 | 15-140 | 2 | 30 | |
| Di-n-butylphthalate | 2.36 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 4 | 30 | |
| Di-n-octylphthalate | 2.23 | 0.500 | mg/kg wet | 2.500 | | 89 | 40-140 | 7 | 30 | |
| Fluoranthene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 3 | 30 | |
| Fluorene | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 3 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DE40705 - 3546** | | | | | | | | | | |
| Hexachlorobenzene | 2.66 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 3 | 30 | |
| Hexachlorobutadiene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 8 | 30 | |
| Hexachloroethane | 2.02 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | 3 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.34 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 4 | 30 | |
| Isophorone | 1.76 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | 8 | 30 | |
| Naphthalene | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 40-140 | 8 | 30 | |
| Nitrobenzene | 1.88 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | 6 | 30 | |
| N-Nitrosodimethylamine | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | 7 | 30 | |
| Pentachlorophenol | 2.10 | 1.00 | mg/kg wet | 2.500 | | 84 | 15-140 | 5 | 30 | |
| Phenanthrene | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 4 | 30 | |
| Phenol | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 15-140 | 8 | 30 | |
| Pyrene | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 4 | 30 | |
| Pyridine | 1.84 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | 7 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.19* | | mg/kg wet | *2.500* | | *87* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *4.21* | | mg/kg wet | *3.750* | | *112* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.17* | | mg/kg wet | *3.750* | | *85* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.27* | | mg/kg wet | *2.500* | | *91* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.05* | | mg/kg wet | *3.750* | | *81* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.96* | | mg/kg wet | *2.500* | | *78* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.06* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.61* | | mg/kg wet | *2.500* | | *104* | *30-130* | | | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE41008 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0211* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0204* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE41008 - 3540C** | | | | | | | | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0178* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0189* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 80 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0205* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0196* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0184* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0186* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | 9 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | 9 | 30 | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 93 | 40-140 | 11 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 96 | 40-140 | 13 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0229* | | mg/kg wet | *0.02500* | | *92* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0222* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| **Batch DE41057 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0172* | | mg/kg wet | *0.02500* | | *69* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0164* | | mg/kg wet | *0.02500* | | *66* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0156* | | mg/kg wet | *0.02500* | | *62* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0165* | | mg/kg wet | *0.02500* | | *66* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE41057 - 3540C** | | | | | | | | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 63 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 63 | 40-140 | | | |
| Aroclor 1260 | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 64 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 64 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0160* | | mg/kg wet | *0.02500* | | *64* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0154* | | mg/kg wet | *0.02500* | | *61* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0150* | | mg/kg wet | *0.02500* | | *60* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0148* | | mg/kg wet | *0.02500* | | *59* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 75 | 40-140 | 17 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 74 | 40-140 | 16 | 30 | |
| Aroclor 1260 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 78 | 40-140 | 20 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 75 | 40-140 | 16 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0189* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0180* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0178* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| **Batch DE41504 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0184* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0155* | | mg/kg wet | *0.02500* | | *62* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0176* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0182* | | mg/kg wet | *0.02500* | | *73* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 99 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE41504 - 3540C** | | | | | | | | | | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 92 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 100 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 97 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0226* | | mg/kg wet | *0.02500* | | *90* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0204* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0209* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0206* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 16 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 70 | 40-140 | 27 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 73 | 40-140 | 31 | 30 | D+ |
| Aroclor 1260 [2C] | 0.3 | 0.05 | mg/kg wet | 0.5000 | | 68 | 40-140 | 35 | 30 | D+ |
| *Surrogate: Decachlorobiphenyl* | *0.0174* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0145* | | mg/kg wet | *0.02500* | | *58* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0179* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0171* | | mg/kg wet | *0.02500* | | *68* | *30-150* | | | |
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40622 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 4,4´-DDD | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDD [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Chlordane (Total) | ND | 0.0200 | mg/kg wet | | | | | | | |
| Chlordane (Total) [2C] | ND | 0.0200 | mg/kg wet | | | | | | | |
| delta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| delta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate | ND | 0.0025 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8081B Organochlorine Pesticides | | | | | | | | | | |
| **Batch DE40622 - 3546** | | | | | | | | | | |
| Endosulfan Sulfate [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) [2C] | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Toxaphene | ND | 0.125 | mg/kg wet | | | | | | | |
| Toxaphene [2C] | ND | 0.125 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0146* | | mg/kg wet | *0.01250* | | *117* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0146* | | mg/kg wet | *0.01250* | | *117* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0127* | | mg/kg wet | *0.01250* | | *102* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0132* | | mg/kg wet | *0.01250* | | *105* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 4,4´-DDD | 0.0166 | 0.0025 | mg/kg wet | 0.01250 | | 133 | 40-140 | | | |
| 4,4´-DDD [2C] | 0.0172 | 0.0025 | mg/kg wet | 0.01250 | | 138 | 40-140 | | | |
| 4,4´-DDE | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | | | |
| 4,4´-DDE [2C] | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | | | |
| 4,4´-DDT | 0.0154 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | | | |
| 4,4´-DDT [2C] | 0.0156 | 0.0025 | mg/kg wet | 0.01250 | | 125 | 40-140 | | | |
| Aldrin | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Aldrin [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| alpha-BHC | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| alpha-BHC [2C] | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | | | |
| alpha-Chlordane | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| alpha-Chlordane [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| beta-BHC | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| beta-BHC [2C] | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| delta-BHC | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| delta-BHC [2C] | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | | | |
| Dieldrin | 0.0151 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | | | |
| Dieldrin [2C] | 0.0157 | 0.0025 | mg/kg wet | 0.01250 | | 126 | 40-140 | | | |
| Endosulfan I | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Endosulfan I [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| Endosulfan II | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40622 - 3546** | | | | | | | | | | |
| Endosulfan II [2C] | 0.0154 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | | | |
| Endosulfan Sulfate | 0.0155 | 0.0025 | mg/kg wet | 0.01250 | | 124 | 40-140 | | | |
| Endosulfan Sulfate [2C] | 0.0158 | 0.0025 | mg/kg wet | 0.01250 | | 126 | 40-140 | | | |
| Endrin | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | | | |
| Endrin [2C] | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | | | |
| Endrin Ketone | 0.0166 | 0.0025 | mg/kg wet | 0.01250 | | 133 | 40-140 | | | |
| Endrin Ketone [2C] | 0.0166 | 0.0025 | mg/kg wet | 0.01250 | | 132 | 40-140 | | | |
| gamma-BHC (Lindane) | 0.0140 | 0.0015 | mg/kg wet | 0.01250 | | 112 | 40-140 | | | |
| gamma-BHC (Lindane) [2C] | 0.0143 | 0.0015 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| gamma-Chlordane | 0.0156 | 0.0025 | mg/kg wet | 0.01250 | | 125 | 40-140 | | | |
| gamma-Chlordane [2C] | 0.0160 | 0.0025 | mg/kg wet | 0.01250 | | 128 | 40-140 | | | |
| Heptachlor | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| Heptachlor [2C] | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Heptachlor Epoxide | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |
| Heptachlor Epoxide [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| Hexachlorobenzene | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | | | |
| Hexachlorobenzene [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Methoxychlor | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | | | |
| Methoxychlor [2C] | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0150* | | mg/kg wet | *0.01250* | | *120* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0150* | | mg/kg wet | *0.01250* | | *120* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0129* | | mg/kg wet | *0.01250* | | *103* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0132* | | mg/kg wet | *0.01250* | | *106* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 4,4´-DDD | 0.0159 | 0.0025 | mg/kg wet | 0.01250 | | 128 | 40-140 | 4 | 30 | |
| 4,4´-DDD [2C] | 0.0166 | 0.0025 | mg/kg wet | 0.01250 | | 133 | 40-140 | 4 | 30 | |
| 4,4´-DDE | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 3 | 30 | |
| 4,4´-DDE [2C] | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 2 | 30 | |
| 4,4´-DDT | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 3 | 30 | |
| 4,4´-DDT [2C] | 0.0151 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | 3 | 30 | |
| Aldrin | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 1 | 30 | |
| Aldrin [2C] | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 1 | 30 | |
| alpha-BHC | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 1 | 30 | |
| alpha-BHC [2C] | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 1 | 30 | |
| alpha-Chlordane | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 3 | 30 | |
| alpha-Chlordane [2C] | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | 2 | 30 | |
| beta-BHC | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | 2 | 30 | |
| beta-BHC [2C] | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 2 | 30 | |
| delta-BHC | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 3 | 30 | |
| delta-BHC [2C] | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 3 | 30 | |
| Dieldrin | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 3 | 30 | |
| Dieldrin [2C] | 0.0153 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | 3 | 30 | |
| Endosulfan I | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | 3 | 30 | |
| Endosulfan I [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 2 | 30 | |
| Endosulfan II | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 3 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40622 - 3546** | | | | | | | | | | |
| Endosulfan II [2C] | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 3 | 30 | |
| Endosulfan Sulfate | 0.0150 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | 3 | 30 | |
| Endosulfan Sulfate [2C] | 0.0153 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | 3 | 30 | |
| Endrin | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 3 | 30 | |
| Endrin [2C] | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 3 | 30 | |
| Endrin Ketone | 0.0159 | 0.0025 | mg/kg wet | 0.01250 | | 127 | 40-140 | 4 | 30 | |
| Endrin Ketone [2C] | 0.0159 | 0.0025 | mg/kg wet | 0.01250 | | 127 | 40-140 | 4 | 30 | |
| gamma-BHC (Lindane) | 0.0137 | 0.0015 | mg/kg wet | 0.01250 | | 110 | 40-140 | 2 | 30 | |
| gamma-BHC (Lindane) [2C] | 0.0141 | 0.0015 | mg/kg wet | 0.01250 | | 113 | 40-140 | 2 | 30 | |
| gamma-Chlordane | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | 3 | 30 | |
| gamma-Chlordane [2C] | 0.0157 | 0.0025 | mg/kg wet | 0.01250 | | 125 | 40-140 | 2 | 30 | |
| Heptachlor | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 1 | 30 | |
| Heptachlor [2C] | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 1 | 30 | |
| Heptachlor Epoxide | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 2 | 30 | |
| Heptachlor Epoxide [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 2 | 30 | |
| Hexachlorobenzene | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | 0.2 | 30 | |
| Hexachlorobenzene [2C] | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 0.4 | 30 | |
| Methoxychlor | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 5 | 30 | |
| Methoxychlor [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 3 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0138* | | mg/kg wet | *0.01250* | | *110* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0139* | | mg/kg wet | *0.01250* | | *111* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0125* | | mg/kg wet | *0.01250* | | *100* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0128* | | mg/kg wet | *0.01250* | | *102* | *30-150* | | | |
| **Batch DE40810 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 4,4´-DDD | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDD [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Chlordane (Total) | ND | 0.0200 | mg/kg wet | | | | | | | |
| Chlordane (Total) [2C] | ND | 0.0200 | mg/kg wet | | | | | | | |
| delta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| delta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin | ND | 0.0025 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40810 - 3546** | | | | | | | | | | |
| Dieldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) [2C] | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Toxaphene | ND | 0.125 | mg/kg wet | | | | | | | |
| Toxaphene [2C] | ND | 0.125 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0119* | | mg/kg wet | *0.01250* | | *95* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0117* | | mg/kg wet | *0.01250* | | *94* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0122* | | mg/kg wet | *0.01250* | | *97* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0122* | | mg/kg wet | *0.01250* | | *97* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 4,4´-DDD | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | | | |
| 4,4´-DDD [2C] | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | | | |
| 4,4´-DDE | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| 4,4´-DDE [2C] | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |
| 4,4´-DDT | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | | | |
| 4,4´-DDT [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | | | |
| Aldrin | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Aldrin [2C] | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| alpha-BHC | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| alpha-BHC [2C] | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| alpha-Chlordane | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | | | |
| alpha-Chlordane [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| beta-BHC | 0.0122 | 0.0025 | mg/kg wet | 0.01250 | | 97 | 40-140 | | | |
| beta-BHC [2C] | 0.0118 | 0.0025 | mg/kg wet | 0.01250 | | 94 | 40-140 | | | |
| delta-BHC | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40810 - 3546** | | | | | | | | | | |
| delta-BHC [2C] | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Dieldrin | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | | | |
| Dieldrin [2C] | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| Endosulfan I | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | | | |
| Endosulfan I [2C] | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| Endosulfan II | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Endosulfan II [2C] | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| Endosulfan Sulfate | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| Endosulfan Sulfate [2C] | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Endrin | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |
| Endrin [2C] | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Endrin Ketone | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| Endrin Ketone [2C] | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |
| gamma-BHC (Lindane) | 0.0133 | 0.0015 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| gamma-BHC (Lindane) [2C] | 0.0132 | 0.0015 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| gamma-Chlordane | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | | | |
| gamma-Chlordane [2C] | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | | | |
| Heptachlor | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | | | |
| Heptachlor [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Heptachlor Epoxide | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Heptachlor Epoxide [2C] | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Hexachlorobenzene | 0.0119 | 0.0025 | mg/kg wet | 0.01250 | | 95 | 40-140 | | | |
| Hexachlorobenzene [2C] | 0.0118 | 0.0025 | mg/kg wet | 0.01250 | | 95 | 40-140 | | | |
| Methoxychlor | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| Methoxychlor [2C] | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0134* | | mg/kg wet | *0.01250* | | *107* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0133* | | mg/kg wet | *0.01250* | | *106* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0125* | | mg/kg wet | *0.01250* | | *100* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0126* | | mg/kg wet | *0.01250* | | *100* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 4,4´-DDD | 0.0158 | 0.0025 | mg/kg wet | 0.01250 | | 126 | 40-140 | 6 | 30 | |
| 4,4´-DDD [2C] | 0.0155 | 0.0025 | mg/kg wet | 0.01250 | | 124 | 40-140 | 7 | 30 | |
| 4,4´-DDE | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | 6 | 30 | |
| 4,4´-DDE [2C] | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | 6 | 30 | |
| 4,4´-DDT | 0.0151 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | 4 | 30 | |
| 4,4´-DDT [2C] | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 5 | 30 | |
| Aldrin | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 7 | 30 | |
| Aldrin [2C] | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 6 | 30 | |
| alpha-BHC | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 5 | 30 | |
| alpha-BHC [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 6 | 30 | |
| alpha-Chlordane | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 6 | 30 | |
| alpha-Chlordane [2C] | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | 6 | 30 | |
| beta-BHC | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 5 | 30 | |
| beta-BHC [2C] | 0.0124 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | 5 | 30 | |
| delta-BHC | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 7 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DE40810 - 3546** | | | | | | | | | | |
| delta-BHC [2C] | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 5 | 30 | |
| Dieldrin | 0.0153 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | 6 | 30 | |
| Dieldrin [2C] | 0.0153 | 0.0025 | mg/kg wet | 0.01250 | | 122 | 40-140 | 7 | 30 | |
| Endosulfan I | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 6 | 30 | |
| Endosulfan I [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 6 | 30 | |
| Endosulfan II | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 7 | 30 | |
| Endosulfan II [2C] | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 7 | 30 | |
| Endosulfan Sulfate | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 5 | 30 | |
| Endosulfan Sulfate [2C] | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 6 | 30 | |
| Endrin | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | 6 | 30 | |
| Endrin [2C] | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 6 | 30 | |
| Endrin Ketone | 0.0150 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | 6 | 30 | |
| Endrin Ketone [2C] | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | 6 | 30 | |
| gamma-BHC (Lindane) | 0.0140 | 0.0015 | mg/kg wet | 0.01250 | | 112 | 40-140 | 5 | 30 | |
| gamma-BHC (Lindane) [2C] | 0.0138 | 0.0015 | mg/kg wet | 0.01250 | | 110 | 40-140 | 5 | 30 | |
| gamma-Chlordane | 0.0158 | 0.0025 | mg/kg wet | 0.01250 | | 127 | 40-140 | 6 | 30 | |
| gamma-Chlordane [2C] | 0.0158 | 0.0025 | mg/kg wet | 0.01250 | | 126 | 40-140 | 7 | 30 | |
| Heptachlor | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 6 | 30 | |
| Heptachlor [2C] | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 6 | 30 | |
| Heptachlor Epoxide | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 5 | 30 | |
| Heptachlor Epoxide [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 6 | 30 | |
| Hexachlorobenzene | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | 5 | 30 | |
| Hexachlorobenzene [2C] | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | 6 | 30 | |
| Methoxychlor | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 5 | 30 | |
| Methoxychlor [2C] | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 5 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0139* | | mg/kg wet | *0.01250* | | *111* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0137* | | mg/kg wet | *0.01250* | | *110* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0128* | | mg/kg wet | *0.01250* | | *102* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0129* | | mg/kg wet | *0.01250* | | *103* | *30-150* | | | |
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DE40659 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 2,4,5-T | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-T [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4-D | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-D [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-DB | ND | 0.048 | mg/kg wet | | | | | | | |
| 2,4-DB [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| Dalapon | ND | 0.046 | mg/kg wet | | | | | | | |
| Dalapon [2C] | ND | 0.046 | mg/kg wet | | | | | | | |
| Dicamba | ND | 0.009 | mg/kg wet | | | | | | | |
| Dicamba [2C] | ND | 0.009 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DE40659 - 3546** | | | | | | | | | | |
| Dichlorprop | ND | 0.047 | mg/kg wet | | | | | | | |
| Dichlorprop [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| Dinoseb | ND | 0.048 | mg/kg wet | | | | | | | |
| Dinoseb [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| MCPA | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPA [2C] | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPP | ND | 2.35 | mg/kg wet | | | | | | | |
| MCPP [2C] | ND | 2.35 | mg/kg wet | | | | | | | |
| *Surrogate: DCAA* | *0.149* | | mg/kg wet | *0.2000* | | *74* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.138* | | mg/kg wet | *0.2000* | | *69* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 2,4,5-T | 0.015 | 0.010 | mg/kg wet | 0.01900 | | 78 | 40-140 | | | |
| 2,4,5-T [2C] | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 86 | 40-140 | | | |
| 2,4,5-TP (Silvex) | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 82 | 40-140 | | | |
| 2,4,5-TP (Silvex) [2C] | 0.018 | 0.010 | mg/kg wet | 0.01900 | | 94 | 40-140 | | | |
| 2,4-D | 0.149 | 0.047 | mg/kg wet | 0.1880 | | 79 | 40-140 | | | |
| 2,4-D [2C] | 0.150 | 0.047 | mg/kg wet | 0.1880 | | 80 | 40-140 | | | |
| 2,4-DB | 0.160 | 0.048 | mg/kg wet | 0.1900 | | 84 | 40-140 | | | |
| 2,4-DB [2C] | 0.190 | 0.048 | mg/kg wet | 0.1900 | | 100 | 40-140 | | | |
| Dalapon | 0.339 | 0.046 | mg/kg wet | 0.4550 | | 74 | 40-140 | | | |
| Dalapon [2C] | 0.393 | 0.046 | mg/kg wet | 0.4550 | | 86 | 40-140 | | | |
| Dicamba | 0.015 | 0.009 | mg/kg wet | 0.01880 | | 78 | 40-140 | | | |
| Dicamba [2C] | 0.018 | 0.009 | mg/kg wet | 0.01880 | | 98 | 40-140 | | | |
| Dichlorprop | 0.184 | 0.047 | mg/kg wet | 0.1880 | | 98 | 40-140 | | | |
| Dichlorprop [2C] | 0.186 | 0.047 | mg/kg wet | 0.1880 | | 99 | 40-140 | | | |
| Dinoseb | 0.026 | 0.048 | mg/kg wet | 0.09500 | | 28 | 10-100 | | | |
| Dinoseb [2C] | 0.030 | 0.048 | mg/kg wet | 0.09500 | | 31 | 10-100 | | | |
| MCPA | 15.6 | 2.32 | mg/kg wet | 18.60 | | 84 | 40-140 | | | |
| MCPA [2C] | 18.2 | 2.32 | mg/kg wet | 18.60 | | 98 | 40-140 | | | |
| MCPP | 16.3 | 2.35 | mg/kg wet | 18.80 | | 87 | 40-140 | | | |
| MCPP [2C] | 18.4 | 2.35 | mg/kg wet | 18.80 | | 98 | 40-140 | | | |
| *Surrogate: DCAA* | *0.218* | | mg/kg wet | *0.2000* | | *109* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.206* | | mg/kg wet | *0.2000* | | *103* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 2,4,5-T | 0.013 | 0.010 | mg/kg wet | 0.01900 | | 68 | 40-140 | 14 | 30 | |
| 2,4,5-T [2C] | 0.014 | 0.010 | mg/kg wet | 0.01900 | | 74 | 40-140 | 15 | 30 | |
| 2,4,5-TP (Silvex) | 0.014 | 0.010 | mg/kg wet | 0.01900 | | 72 | 40-140 | 13 | 30 | |
| 2,4,5-TP (Silvex) [2C] | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 82 | 40-140 | 14 | 30 | |
| 2,4-D | 0.134 | 0.047 | mg/kg wet | 0.1880 | | 71 | 40-140 | 11 | 30 | |
| 2,4-D [2C] | 0.130 | 0.047 | mg/kg wet | 0.1880 | | 69 | 40-140 | 14 | 30 | |
| 2,4-DB | 0.144 | 0.048 | mg/kg wet | 0.1900 | | 76 | 40-140 | 11 | 30 | |
| 2,4-DB [2C] | 0.164 | 0.048 | mg/kg wet | 0.1900 | | 86 | 40-140 | 14 | 30 | |
| Dalapon | 0.309 | 0.046 | mg/kg wet | 0.4550 | | 68 | 40-140 | 9 | 30 | |
| Dalapon [2C] | 0.319 | 0.046 | mg/kg wet | 0.4550 | | 70 | 40-140 | 21 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DE40659 - 3546** | | | | | | | | | | |
| Dicamba | 0.014 | 0.009 | mg/kg wet | 0.01880 | | 72 | 40-140 | 8 | 30 | |
| Dicamba [2C] | 0.016 | 0.009 | mg/kg wet | 0.01880 | | 86 | 40-140 | 13 | 30 | |
| Dichlorprop | 0.164 | 0.047 | mg/kg wet | 0.1880 | | 87 | 40-140 | 12 | 30 | |
| Dichlorprop [2C] | 0.164 | 0.047 | mg/kg wet | 0.1880 | | 87 | 40-140 | 13 | 30 | |
| Dinoseb | 0.022 | 0.048 | mg/kg wet | 0.09500 | | 23 | 10-100 | 19 | 30 | |
| Dinoseb [2C] | 0.025 | 0.048 | mg/kg wet | 0.09500 | | 26 | 10-100 | 18 | 30 | |
| MCPA | 13.9 | 2.32 | mg/kg wet | 18.60 | | 75 | 40-140 | 11 | 30 | |
| MCPA [2C] | 16.0 | 2.32 | mg/kg wet | 18.60 | | 86 | 40-140 | 13 | 30 | |
| MCPP | 14.5 | 2.35 | mg/kg wet | 18.80 | | 77 | 40-140 | 12 | 30 | |
| MCPP [2C] | 15.8 | 2.35 | mg/kg wet | 18.80 | | 84 | 40-140 | 15 | 30 | |
| *Surrogate: DCAA* | *0.185* | | mg/kg wet | *0.2000* | | *92* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.172* | | mg/kg wet | *0.2000* | | *86* | *30-150* | | | |
| **Batch DE40762 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 2,4,5-T | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-T [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4-D | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-D [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-DB | ND | 0.048 | mg/kg wet | | | | | | | |
| 2,4-DB [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| Dalapon | ND | 0.046 | mg/kg wet | | | | | | | |
| Dalapon [2C] | ND | 0.046 | mg/kg wet | | | | | | | |
| Dicamba | ND | 0.009 | mg/kg wet | | | | | | | |
| Dicamba [2C] | ND | 0.009 | mg/kg wet | | | | | | | |
| Dichlorprop | ND | 0.047 | mg/kg wet | | | | | | | |
| Dichlorprop [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| Dinoseb | ND | 0.048 | mg/kg wet | | | | | | | |
| Dinoseb [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| MCPA | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPA [2C] | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPP | ND | 2.35 | mg/kg wet | | | | | | | |
| MCPP [2C] | ND | 2.35 | mg/kg wet | | | | | | | |
| *Surrogate: DCAA* | *0.156* | | mg/kg wet | *0.2000* | | *78* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.146* | | mg/kg wet | *0.2000* | | *73* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 2,4,5-T | 0.013 | 0.010 | mg/kg wet | 0.01900 | | 70 | 40-140 | | | |
| 2,4,5-T [2C] | 0.013 | 0.010 | mg/kg wet | 0.01900 | | 70 | 40-140 | | | |
| 2,4,5-TP (Silvex) | 0.014 | 0.010 | mg/kg wet | 0.01900 | | 74 | 40-140 | | | |
| 2,4,5-TP (Silvex) [2C] | 0.015 | 0.010 | mg/kg wet | 0.01900 | | 80 | 40-140 | | | |
| 2,4-D | 0.134 | 0.047 | mg/kg wet | 0.1880 | | 71 | 40-140 | | | |
| 2,4-D [2C] | 0.131 | 0.047 | mg/kg wet | 0.1880 | | 70 | 40-140 | | | |
| 2,4-DB | 0.154 | 0.048 | mg/kg wet | 0.1900 | | 81 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DE40762 - 3546** | | | | | | | | | | |
| 2,4-DB [2C] | 0.160 | 0.048 | mg/kg wet | 0.1900 | | 84 | 40-140 | | | |
| Dalapon | 0.316 | 0.046 | mg/kg wet | 0.4550 | | 69 | 40-140 | | | |
| Dalapon [2C] | 0.332 | 0.046 | mg/kg wet | 0.4550 | | 73 | 40-140 | | | |
| Dicamba | 0.013 | 0.009 | mg/kg wet | 0.01880 | | 70 | 40-140 | | | |
| Dicamba [2C] | 0.015 | 0.009 | mg/kg wet | 0.01880 | | 80 | 40-140 | | | |
| Dichlorprop | 0.168 | 0.047 | mg/kg wet | 0.1880 | | 89 | 40-140 | | | |
| Dichlorprop [2C] | 0.162 | 0.047 | mg/kg wet | 0.1880 | | 86 | 40-140 | | | |
| Dinoseb | 0.021 | 0.048 | mg/kg wet | 0.09500 | | 22 | 10-100 | | | |
| Dinoseb [2C] | 0.023 | 0.048 | mg/kg wet | 0.09500 | | 24 | 10-100 | | | |
| MCPA | 15.9 | 2.32 | mg/kg wet | 18.60 | | 85 | 40-140 | | | |
| MCPA [2C] | 16.9 | 2.32 | mg/kg wet | 18.60 | | 91 | 40-140 | | | |
| MCPP | 15.8 | 2.35 | mg/kg wet | 18.80 | | 84 | 40-140 | | | |
| MCPP [2C] | 16.5 | 2.35 | mg/kg wet | 18.80 | | 88 | 40-140 | | | |
| *Surrogate: DCAA* | *0.177* | | mg/kg wet | *0.2000* | | *88* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.178* | | mg/kg wet | *0.2000* | | *89* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 2,4,5-T | 0.015 | 0.010 | mg/kg wet | 0.01900 | | 78 | 40-140 | 11 | 30 | |
| 2,4,5-T [2C] | 0.015 | 0.010 | mg/kg wet | 0.01900 | | 78 | 40-140 | 11 | 30 | |
| 2,4,5-TP (Silvex) | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 84 | 40-140 | 13 | 30 | |
| 2,4,5-TP (Silvex) [2C] | 0.017 | 0.010 | mg/kg wet | 0.01900 | | 92 | 40-140 | 14 | 30 | |
| 2,4-D | 0.153 | 0.047 | mg/kg wet | 0.1880 | | 81 | 40-140 | 13 | 30 | |
| 2,4-D [2C] | 0.146 | 0.047 | mg/kg wet | 0.1880 | | 78 | 40-140 | 11 | 30 | |
| 2,4-DB | 0.171 | 0.048 | mg/kg wet | 0.1900 | | 90 | 40-140 | 11 | 30 | |
| 2,4-DB [2C] | 0.180 | 0.048 | mg/kg wet | 0.1900 | | 95 | 40-140 | 12 | 30 | |
| Dalapon | 0.376 | 0.046 | mg/kg wet | 0.4550 | | 83 | 40-140 | 18 | 30 | |
| Dalapon [2C] | 0.397 | 0.046 | mg/kg wet | 0.4550 | | 87 | 40-140 | 18 | 30 | |
| Dicamba | 0.016 | 0.009 | mg/kg wet | 0.01880 | | 84 | 40-140 | 18 | 30 | |
| Dicamba [2C] | 0.017 | 0.009 | mg/kg wet | 0.01880 | | 92 | 40-140 | 14 | 30 | |
| Dichlorprop | 0.194 | 0.047 | mg/kg wet | 0.1880 | | 103 | 40-140 | 14 | 30 | |
| Dichlorprop [2C] | 0.183 | 0.047 | mg/kg wet | 0.1880 | | 97 | 40-140 | 12 | 30 | |
| Dinoseb | 0.027 | 0.048 | mg/kg wet | 0.09500 | | 28 | 10-100 | 22 | 30 | |
| Dinoseb [2C] | 0.028 | 0.048 | mg/kg wet | 0.09500 | | 29 | 10-100 | 18 | 30 | |
| MCPA | 18.4 | 2.32 | mg/kg wet | 18.60 | | 99 | 40-140 | 15 | 30 | |
| MCPA [2C] | 19.3 | 2.32 | mg/kg wet | 18.60 | | 104 | 40-140 | 13 | 30 | |
| MCPP | 18.2 | 2.35 | mg/kg wet | 18.80 | | 97 | 40-140 | 14 | 30 | |
| MCPP [2C] | 19.2 | 2.35 | mg/kg wet | 18.80 | | 102 | 40-140 | 15 | 30 | |
| *Surrogate: DCAA* | *0.176* | | mg/kg wet | *0.2000* | | *88* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.174* | | mg/kg wet | *0.2000* | | *87* | *30-150* | | | |
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40243 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40243 - 3546** | | | | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *4.10* | | mg/kg wet | *5.000* | | *82* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.7 | 0.2 | mg/kg wet | 2.500 | | 68 | 40-140 | | | |
| Docosane (C22) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Dodecane (C12) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Eicosane (C20) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Hexacosane (C26) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Hexadecane (C16) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Nonadecane (C19) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Nonane (C9) | 1.4 | 0.2 | mg/kg wet | 2.500 | | 58 | 30-140 | | | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Octadecane (C18) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Tetracosane (C24) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| Tetradecane (C14) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 28.6 | 10.0 | mg/kg wet | 35.00 | | 82 | 40-140 | | | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *4.02* | | mg/kg wet | *5.000* | | *80* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 65 | 40-140 | 5 | 25 | |
| Docosane (C22) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 5 | 25 | |
| Dodecane (C12) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | 6 | 25 | |
| Eicosane (C20) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 5 | 25 | |
| Hexacosane (C26) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 4 | 25 | |
| Hexadecane (C16) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 5 | 25 | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 94 | 40-140 | 0.09 | 25 | |
| Nonadecane (C19) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | 5 | 25 | |
| Nonane (C9) | 1.4 | 0.2 | mg/kg wet | 2.500 | | 55 | 30-140 | 4 | 25 | |
| Octacosane (C28) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 3 | 25 | |
| Octadecane (C18) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | 6 | 25 | |
| Tetracosane (C24) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | 4 | 25 | |
| Tetradecane (C14) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | 6 | 25 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40243 - 3546** | | | | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 27.4 | 10.0 | mg/kg wet | 35.00 | | 78 | 40-140 | 4 | 25 | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 1 | 25 | |
| *Surrogate: O-Terphenyl* | *3.75* | | mg/kg wet | *5.000* | | *75* | *40-140* | | | |
| **Batch DE40623 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *3.82* | | mg/kg wet | *5.000* | | *76* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 65 | 40-140 | | | |
| Docosane (C22) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| Dodecane (C12) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | | | |
| Eicosane (C20) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Hexacosane (C26) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Hexadecane (C16) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Hexatriacontane (C36) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| Nonadecane (C19) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Nonane (C9) | 1.4 | 0.2 | mg/kg wet | 2.500 | | 55 | 30-140 | | | |
| Octacosane (C28) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Octadecane (C18) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Tetracosane (C24) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| Tetradecane (C14) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 28.1 | 10.0 | mg/kg wet | 35.00 | | 80 | 40-140 | | | |
| Triacontane (C30) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *3.79* | | mg/kg wet | *5.000* | | *76* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 63 | 40-140 | 3 | 25 | |
| Docosane (C22) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 0.6 | 25 | |
| Dodecane (C12) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | 2 | 25 | |
| Eicosane (C20) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | 0.6 | 25 | |
| Hexacosane (C26) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 0.1 | 25 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40623 - 3546** | | | | | | | | | | |
| Hexadecane (C16) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | 3 | 25 | |
| Hexatriacontane (C36) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 91 | 40-140 | 2 | 25 | |
| Nonadecane (C19) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 1 | 25 | |
| Nonane (C9) | 1.3 | 0.2 | mg/kg wet | 2.500 | | 53 | 30-140 | 4 | 25 | |
| Octacosane (C28) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | 0.1 | 25 | |
| Octadecane (C18) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | 3 | 25 | |
| Tetracosane (C24) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | 0.9 | 25 | |
| Tetradecane (C14) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | 3 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 27.6 | 10.0 | mg/kg wet | 35.00 | | 79 | 40-140 | 2 | 25 | |
| Triacontane (C30) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | 0.3 | 25 | |
| *Surrogate: O-Terphenyl* | *3.64* | | mg/kg wet | *5.000* | | *73* | *40-140* | | | |
| **Batch DE40661 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *4.27* | | mg/kg wet | *5.000* | | *85* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| Docosane (C22) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Dodecane (C12) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Eicosane (C20) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Hexacosane (C26) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Hexadecane (C16) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Hexatriacontane (C36) | 2.9 | 0.2 | mg/kg wet | 2.500 | | 115 | 40-140 | | | |
| Nonadecane (C19) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 62 | 30-140 | | | |
| Octacosane (C28) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Octadecane (C18) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Tetracosane (C24) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Tetradecane (C14) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 32.2 | 10.0 | mg/kg wet | 35.00 | | 92 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40661 - 3546** | | | | | | | | | | |
| Triacontane (C30) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *4.29* | | mg/kg wet | *5.000* | | *86* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 0.5 | 25 | |
| Docosane (C22) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | 3 | 25 | |
| Dodecane (C12) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 0.2 | 25 | |
| Eicosane (C20) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | 2 | 25 | |
| Hexacosane (C26) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | 4 | 25 | |
| Hexadecane (C16) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | 3 | 25 | |
| Hexatriacontane (C36) | 2.7 | 0.2 | mg/kg wet | 2.500 | | 108 | 40-140 | 6 | 25 | |
| Nonadecane (C19) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 2 | 25 | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 63 | 30-140 | 2 | 25 | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | 4 | 25 | |
| Octadecane (C18) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 4 | 25 | |
| Tetracosane (C24) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 3 | 25 | |
| Tetradecane (C14) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | 1 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 31.6 | 10.0 | mg/kg wet | 35.00 | | 90 | 40-140 | 2 | 25 | |
| Triacontane (C30) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | 4 | 25 | |
| *Surrogate: O-Terphenyl* | *4.13* | | mg/kg wet | *5.000* | | *83* | *40-140* | | | |
| **Batch DE40662 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *4.10* | | mg/kg wet | *5.000* | | *82* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 70 | 40-140 | | | |
| Docosane (C22) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Dodecane (C12) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Eicosane (C20) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Hexacosane (C26) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Hexadecane (C16) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40662 - 3546** | | | | | | | | | | |
| Hexatriacontane (C36) | 2.6 | 0.2 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| Nonadecane (C19) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Nonane (C9) | 1.4 | 0.2 | mg/kg wet | 2.500 | | 57 | 30-140 | | | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Octadecane (C18) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Tetracosane (C24) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Tetradecane (C14) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 29.8 | 10.0 | mg/kg wet | 35.00 | | 85 | 40-140 | | | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *4.01* | | mg/kg wet | *5.000* | | *80* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | 3 | 25 | |
| Docosane (C22) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 2 | 25 | |
| Dodecane (C12) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | 3 | 25 | |
| Eicosane (C20) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 2 | 25 | |
| Hexacosane (C26) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 1 | 25 | |
| Hexadecane (C16) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | 2 | 25 | |
| Hexatriacontane (C36) | 2.7 | 0.2 | mg/kg wet | 2.500 | | 109 | 40-140 | 2 | 25 | |
| Nonadecane (C19) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 2 | 25 | |
| Nonane (C9) | 1.5 | 0.2 | mg/kg wet | 2.500 | | 60 | 30-140 | 4 | 25 | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 1 | 25 | |
| Octadecane (C18) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 2 | 25 | |
| Tetracosane (C24) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | 2 | 25 | |
| Tetradecane (C14) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 2 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 30.4 | 10.0 | mg/kg wet | 35.00 | | 87 | 40-140 | 2 | 25 | |
| Triacontane (C30) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | 0.6 | 25 | |
| *Surrogate: O-Terphenyl* | *4.10* | | mg/kg wet | *5.000* | | *82* | *40-140* | | | |
| **Batch DE40755 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DE40755 - 3546** | | | | | | | | | | |
| *Surrogate: O-Terphenyl* | *4.92* | | mg/kg wet | *5.000* | | *98* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| Docosane (C22) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Dodecane (C12) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Eicosane (C20) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Hexacosane (C26) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Hexadecane (C16) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Nonadecane (C19) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 64 | 30-140 | | | |
| Octacosane (C28) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Octadecane (C18) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Tetracosane (C24) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Tetradecane (C14) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 30.7 | 10.0 | mg/kg wet | 35.00 | | 88 | 40-140 | | | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *4.58* | | mg/kg wet | *5.000* | | *92* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | 0.3 | 25 | |
| Docosane (C22) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 93 | 40-140 | 3 | 25 | |
| Dodecane (C12) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 0.3 | 25 | |
| Eicosane (C20) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 91 | 40-140 | 2 | 25 | |
| Hexacosane (C26) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 95 | 40-140 | 3 | 25 | |
| Hexadecane (C16) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | 0.2 | 25 | |
| Hexatriacontane (C36) | 2.6 | 0.2 | mg/kg wet | 2.500 | | 105 | 40-140 | 8 | 25 | |
| Nonadecane (C19) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 90 | 40-140 | 2 | 25 | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 64 | 30-140 | 0.06 | 25 | |
| Octacosane (C28) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 90 | 40-140 | 3 | 25 | |
| Octadecane (C18) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | 1 | 25 | |
| Tetracosane (C24) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 89 | 40-140 | 3 | 25 | |
| Tetradecane (C14) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | 0.6 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 31.1 | 10.0 | mg/kg wet | 35.00 | | 89 | 40-140 | 1 | 25 | |
| Triacontane (C30) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | 4 | 25 | |
| *Surrogate: O-Terphenyl* | *4.53* | | mg/kg wet | *5.000* | | *91* | *40-140* | | | |
| **Classical Chemistry** | | | | | | | | | | |
| **Batch DE40635 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Conductivity | ND | 5 | umhos/cm | | | | | | | |
| **LCS** | | | | | | | | | | |
| Conductivity | 1280 | | umhos/cm | 1410 | | 91 | 90-110 | | | |
| **Batch DE40653 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Classical Chemistry** | | | | | | | | | | |
| **Batch DE40653 - General Preparation** | | | | | | | | | | |
| Reactive Cyanide | ND | 2.0 | mg/kg | | | | | | | |
| Reactive Sulfide | ND | 2.0 | mg/kg | | | | | | | |
| **LCS** | | | | | | | | | | |
| Reactive Cyanide | 4.1 | 2.0 | mg/kg | 100.3 | | 4 | 0.68-5.41 | | | |
| Reactive Sulfide | 2.0 | 2.0 | mg/kg | 10.00 | | 20 | 0-44 | | | |
| **Batch DE40727 - General Preparation** | | | | | | | | | | |
| **Reference** | | | | | | | | | | |
| Flashpoint | 81 | | °F | 81.00 | | 100 | 97.9-102.1 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

**Notes and Definitions**

| | |
|---|---|
| P | Percent difference between primary and confirmation results exceeds 40% (P). |
| B+ | Blank Spike recovery is above upper control limit (B+). |
| CD- | Continuing Calibration %Diff/Drift is below control limit (CD-). |
| CD+ | Continuing Calibration %Diff/Drift is above control limit (CD+). |
| D | Diluted. |
| D+ | Relative percent difference for duplicate is outside of criteria (D+). |
| EL | Elevated Method Reporting Limits due to sample matrix (EL). |
| > | Greater than. |
| LC | Lower value is used due to matrix interferences (LC). |
| Z18 | Temperature is not within 23 +/-2 ºC. |
| Q | Calibration required quadratic regression (Q). |
| RRF | Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration |
| S+ | Surrogate recovery(ies) above upper control limit (S+). |
| U | Analyte included in the analysis, but not detected |
| WL | Results obtained from a deionized water leach of the sample. |
| X* | RSD of replicate analysis > 20%. Reanalysis produced similar results. |
| ICV+ | Initial Calibration Verification recovery is above upper control limit (ICV+). |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0124

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0124
Date Received: 5/3/2024
Project Due Date: 5/10/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** (Yes) / No / NA
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? (Yes) / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? (Yes) / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: 5/3/24 Time: 18:43 By: //

Sample Receiving Notes:

Two vials for E-5 have E-1 on labels. Times Correct. Bagged together.

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 544267 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 1 | 544268 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 1 | 544299 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 1 | 544315 | Yes | N/A | Yes | 8 oz jar | NP | |
| 1 | 544316 | Yes | N/A | Yes | 8 oz jar | NP | |
| 1 | 544347 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 544269 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 2 | 544270 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 2 | 544300 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 2 | 544317 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 544318 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 544348 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 544271 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 3 | 544272 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 3 | 544301 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 3 | 544319 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 544320 | Yes | N/A | Yes | 8 oz jar | NP | |
| 3 | 544349 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 544273 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 4 | 544274 | Yes | N/A | Yes | VOA Vial | DI Water | |

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24E0124

Date Received: 5/3/2024

| | | | | | | |
|---|---|---|---|---|---|---|
| 4 | 544302 | Yes | N/A | Yes | VOA Vial | MeOH |
| 4 | 544321 | Yes | N/A | Yes | 8 oz jar | NP |
| 4 | 544322 | Yes | N/A | Yes | 8 oz jar | NP |
| 4 | 544350 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 5 | 544275 | Yes | N/A | Yes | VOA Vial | DI Water |
| 5 | 544276 | Yes | N/A | Yes | VOA Vial | DI Water |
| 5 | 544303 | Yes | N/A | Yes | VOA Vial | MeOH |
| 5 | 544323 | Yes | N/A | Yes | 8 oz jar | NP |
| 5 | 544324 | Yes | N/A | Yes | 8 oz jar | NP |
| 5 | 544351 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 6 | 544277 | Yes | N/A | Yes | VOA Vial | DI Water |
| 6 | 544278 | Yes | N/A | Yes | VOA Vial | DI Water |
| 6 | 544304 | Yes | N/A | Yes | VOA Vial | MeOH |
| 6 | 544325 | Yes | N/A | Yes | 8 oz jar | NP |
| 6 | 544326 | Yes | N/A | Yes | 8 oz jar | NP |
| 6 | 544352 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 7 | 544279 | Yes | N/A | Yes | VOA Vial | DI Water |
| 7 | 544280 | Yes | N/A | Yes | VOA Vial | DI Water |
| 7 | 544305 | Yes | N/A | Yes | VOA Vial | MeOH |
| 7 | 544327 | Yes | N/A | Yes | 8 oz jar | NP |
| 7 | 544328 | Yes | N/A | Yes | 8 oz jar | NP |
| 7 | 544353 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 8 | 544281 | Yes | N/A | Yes | VOA Vial | DI Water |
| 8 | 544282 | Yes | N/A | Yes | VOA Vial | DI Water |
| 8 | 544306 | Yes | N/A | Yes | VOA Vial | MeOH |
| 8 | 544329 | Yes | N/A | Yes | 8 oz jar | NP |
| 8 | 544330 | Yes | N/A | Yes | 8 oz jar | NP |
| 8 | 544354 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 9 | 544283 | Yes | N/A | Yes | VOA Vial | DI Water |
| 9 | 544284 | Yes | N/A | Yes | VOA Vial | DI Water |
| 9 | 544307 | Yes | N/A | Yes | VOA Vial | MeOH |
| 9 | 544331 | Yes | N/A | Yes | 8 oz jar | NP |
| 9 | 544332 | Yes | N/A | Yes | 8 oz jar | NP |
| 9 | 544355 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 10 | 544285 | Yes | N/A | Yes | VOA Vial | DI Water |
| 10 | 544286 | Yes | N/A | Yes | VOA Vial | DI Water |
| 10 | 544308 | Yes | N/A | Yes | VOA Vial | MeOH |
| 10 | 544333 | Yes | N/A | Yes | 8 oz jar | NP |
| 10 | 544334 | Yes | N/A | Yes | 8 oz jar | NP |
| 10 | 544356 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 11 | 544287 | Yes | N/A | Yes | VOA Vial | DI Water |
| 11 | 544288 | Yes | N/A | Yes | VOA Vial | DI Water |
| 11 | 544309 | Yes | N/A | Yes | VOA Vial | MeOH |
| 11 | 544335 | Yes | N/A | Yes | 8 oz jar | NP |
| 11 | 544336 | Yes | N/A | Yes | 8 oz jar | NP |
| 11 | 544357 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 12 | 544289 | Yes | N/A | Yes | VOA Vial | DI Water |
| 12 | 544290 | Yes | N/A | Yes | VOA Vial | DI Water |
| 12 | 544310 | Yes | N/A | Yes | VOA Vial | MeOH |
| 12 | 544337 | Yes | N/A | Yes | 8 oz jar | NP |
| 12 | 544338 | Yes | N/A | Yes | 8 oz jar | NP |
| 12 | 544358 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 13 | 544291 | Yes | N/A | Yes | VOA Vial | DI Water |
| 13 | 544292 | Yes | N/A | Yes | VOA Vial | DI Water |
| 13 | 544311 | Yes | N/A | Yes | VOA Vial | MeOH |
| 13 | 544339 | Yes | N/A | Yes | 8 oz jar | NP |

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24E0124
Date Received: 5/3/2024

| | | | | | | |
|---|---|---|---|---|---|---|
| 13 | 544340 | Yes | N/A | Yes | 8 oz jar | NP |
| 13 | 544359 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 14 | 544293 | Yes | N/A | Yes | VOA Vial | DI Water |
| 14 | 544294 | Yes | N/A | Yes | VOA Vial | DI Water |
| 14 | 544312 | Yes | N/A | Yes | VOA Vial | MeOH |
| 14 | 544341 | Yes | N/A | Yes | 8 oz jar | NP |
| 14 | 544342 | Yes | N/A | Yes | 8 oz jar | NP |
| 14 | 544360 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 15 | 544295 | Yes | N/A | Yes | VOA Vial | DI Water |
| 15 | 544296 | Yes | N/A | Yes | VOA Vial | DI Water |
| 15 | 544313 | Yes | N/A | Yes | VOA Vial | MeOH |
| 15 | 544343 | Yes | N/A | Yes | 8 oz jar | NP |
| 15 | 544344 | Yes | N/A | Yes | 8 oz jar | NP |
| 15 | 544361 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 16 | 544297 | Yes | N/A | Yes | VOA Vial | DI Water |
| 16 | 544298 | Yes | N/A | Yes | VOA Vial | DI Water |
| 16 | 544314 | Yes | N/A | Yes | VOA Vial | MeOH |
| 16 | 544345 | Yes | N/A | Yes | 8 oz jar | NP |
| 16 | 544346 | Yes | N/A | Yes | 8 oz jar | NP |
| 16 | 544362 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 17 | 545072 | Yes | N/A | Yes | VOA Vial | MeOH |
| 17 | 545074 | Yes | N/A | Yes | VOA Vial | DI Water |
| 17 | 545075 | Yes | N/A | Yes | VOA Vial | DI Water |
| 17 | 545078 | Yes | N/A | Yes | 8 oz jar | NP |
| 17 | 545079 | Yes | N/A | Yes | 8 oz jar | NP |
| 17 | 545082 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 18 | 545073 | Yes | N/A | Yes | VOA Vial | MeOH |
| 18 | 545076 | Yes | N/A | Yes | VOA Vial | DI Water |
| 18 | 545077 | Yes | N/A | Yes | VOA Vial | DI Water |
| 18 | 545080 | Yes | N/A | Yes | 8 oz jar | NP |
| 18 | 545081 | Yes | N/A | Yes | 8 oz jar | NP |
| 18 | 545083 | Yes | N/A | Yes | 4 oz. Jar | NP |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials AA

Are barcode labels on correct containers? Yes / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: _____ Date & Time: 5/3/24 1836

Reviewed By: _____ Date & Time: 5/3/24 1843

1/15

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24E0124

| | | |
|---|---|---|
| **Turn Time** | 5 | Days |
| **Regulatory State** | Massachusetts | |
| **Reporting Limits** | | |

**Is this project for any of the following?:** ○ CT RCP ◉ MA MCP ○ RGP

**Electonic Deliverables:** ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | RCRA8 Metals | PCB | TPH | SVOC - incl pyr | Pest - incl Tox | Herbicides | Reactivity | Conductivity | pH | Free Liquid | Flashpoint | VOC - high | VOC - low | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5-2-24 | 0950 | Composite | Soil | C-1 | | | | | | | | | | | | | | | | |
| 2 | " | 1010 | Composite | Soil | C-3 | | | | | | | | | | | | | | | | |
| 3 | " | 1030 | Composite | Soil | C-5 | | | | | | | | | | | | | | | | |
| 4 | " | 1055 | Composite | Soil | C-7 | | | | | | | | | | | | | | MW | | |
| 5 | " | 1100 | Composite | Soil | D-8.5 | | | | | | | | | | | | | | | | |
| 6 | " | 1340 | Composite | Soil | E-7 | | | | | | | | | | | | | | | | |
| 7 | " | 1330 | Composite | Soil | E-5 | | | | | | | | | | | | | | | | |
| 8 | " | 1310 | Composite | Soil | E-1 | | | | | | | | | | | | | | | | |
| 9 | " | 1345 | Composite | Soil | G-7 | | | | | | | | | | | | | | | | |
| 10 | " | 1350 | Composite | Soil | G-5 | | | | | | | | | | | | | | | | |
| **Container Type:** | | | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | | | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | V | V | | | |
| **Container Volume:** | | | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 7 | 7 | | | |
| **Preservation Code:** | | | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 10 | | | |
| | | | | | **Number of Containers per Sample:** | 1 | | | | | 1 | | | | | 1 | 1 | 2 | | | |

**Laboratory Use Only**

Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C /IR

**Sampled by :** DB and KD

**Comments:** **Please specify "Other" preservative and containers types in this space**

Run TCLP if fails 20x
~~run hexavalent chromium if total Chromium >100 ppm~~

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-3-24 1130 | 5/3/24 11:3 | 5/3/24 17:22 | 5/3/24 1722 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ML 5/6/24

2/5

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24E0124

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Is this project for any of the following?: | ○ CT RCP ◉ MA MCP ○ RGP | |
| Reporting Limits | | |
| Electonic Deliverables | ☑ Data Checker ☑ Other (Please Specify →) | ☑ Excel EDD |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | RCRA8 Metals | PCB | TPH | SVOC - incl pyr | Pest - incl Tox | Herbicides | Reactivity | Conductivity | pH | Free Liquid | Flashpoint | VOC - high | VOC - low | HOLD | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 11 | 5-2-24 | 1145 | Composite | Soil | G-1 | | | | | | | | | | | | | | | | |
| 11 12 | " | 1430 | Composite | Soil | H-8.5 | | | | | | | | | | | | | | | | |
| 12 13 | " | 1405 | Composite | Soil | I-7 | | | | | | | | | | | | | | | | |
| 13 14 | " | 1400 | Composite | Soil | I-5 | | | | | | | | | | | | | | | | |
| 14 15 | " | 1120 | Composite | Soil | I-1 | | | | | | | | | | | | | | | | |
| 15 16 | 5-3-24 | 0845 | Composite | Soil | E-3 0-3 | | | | | | | | | | | | | | | | |
| 16 17 | 5-3-24 | 0900 | Composite | Soil | E-3 3-7 | | | | | | | | | | | | | | | | |
| 17 18 | " | 1115 | Composite | Soil | II-8.5 5-6 | X | X | X | X | X | X | X | X | X | X | X | X | | | | |
| — | " | 1125 | Composite | Soil | JJ/II-6 6-7 | | | | | | | | | | | | | | | | |
| | | | Composite | Soil | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | V | V | | | |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 7 | 7 | | | |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 10 | | | |
| | | | | | | | | | | | **Number of Containers per Sample:** | 1 | | | | | 1 | | | | | 1 | 1 | 2 | | | |

**Laboratory Use Only**

Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C Ice

**Sampled by :** DB and KD

**Comments:** Please specify "Other" preservative and containers types in this space

Run TCLP if fails 20x

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-3-24 1130 | 5/3/24 11:36 | 5/3/24 17:21 | 5/3/24 1722 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

## Marc Levesque

**From:** Dal Bello, Cassia <cdalbello@cecinc.com>
**Sent:** Friday, May 3, 2024 12:35 PM
**To:** Marc Levesque
**Cc:** Kitchen, Jonathan; Barboza, Dave
**Subject:** [*EXTERNAL*] 332-344 Sample off-hold
**Attachments:** Waste COC 5-3-2024 - II-8.5 Change.jpg

**CYBERSECURITY WARNING:** This email is sent from outside of The RISE Group, Inc.
**DO NOT** click links or open attachments unless you recognize the sender and have verified the content is safe.

Hi Marc,

We just had our last round of samples picked up from our site in New Bedford (project 332-344).
We identified on the COC that sample II-8.5 5-6 would be placed on hold. We would like to run this sample for all of the waste characterization parameters listed instead of placing it on hold.

Are you able to facilitate this change for us? I attached a corrected version of the COC.

Thanks!

Cassia

**Cassia Dal Bello** | *Assistant Project Manager*
Civil & Environmental Consultants, Inc.
2 Corporation Way, Suite 160
Peabody, MA 01960
**direct** 774.409.2670 **office** 774.501.2176
www.cecinc.com

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ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E0125**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 1:50 pm, May 16, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## SAMPLE RECEIPT

The following samples were received on May 03, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E0125-01 | C-5 4-5 | Soil | 8082A |
| 24E0125-02 | C-6 1-2 | Soil | 8082A |
| 24E0125-03 | C-5 1-2 | Soil | 8082A |
| 24E0125-04 | C-3 1-2 | Soil | 8082A |
| 24E0125-05 | C-1 1-2 | Soil | 8082A |
| 24E0125-06 | C-3 4-5 | Soil | 8082A |
| 24E0125-07 | D-4 1-2 | Soil | 8082A |
| 24E0125-08 | D-2 1-2 | Soil | 8082A |
| 24E0125-09 | D-4 4-5 | Soil | 8082A |
| 24E0125-10 | E-1 1-2 | Soil | 8082A |
| 24E0125-11 | H-1 DUP 1-2 | Soil | 8082A |
| 24E0125-12 | F-1 1-2 | Soil | 8082A |
| 24E0125-13 | G-1 1-2 | Soil | 8082A |
| 24E0125-14 | H-1 1-2 | Soil | 8082A |
| 24E0125-15 | E-1 4-5 | Soil | 8082A |
| 24E0125-16 | G-1 4-5 | Soil | 8082A |
| 24E0125-17 | H-1 4-5 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## PROJECT NARRATIVE

**No unusual observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E0125-01 through 24E0125-17**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes (x) No ( )* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: May 16, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5 4-5
Date Sampled: 05/02/24 10:30
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| **Aroclor 1254** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *93 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-6 1-2
Date Sampled: 05/02/24 10:45
Percent Solids: 95
Initial Volume: 19.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5 1-2
Date Sampled: 05/02/24 10:30
Percent Solids: 92
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *87 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *87 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3 1-2
Date Sampled: 05/02/24 10:10
Percent Solids: 94
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1 1-2
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 20.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3 4-5
Date Sampled: 05/02/24 10:10
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1254 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-4 1-2
Date Sampled: 05/02/24 11:05
Percent Solids: 95
Initial Volume: 20.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| **Aroclor 1254 [2C]** | **0.09** (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *79 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-2 1-2
Date Sampled: 05/02/24 11:10
Percent Solids: 91
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *84 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-4 4-5
Date Sampled: 05/02/24 11:05
Percent Solids: 94
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1260 [2C] | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 1-2
Date Sampled: 05/02/24 13:10
Percent Solids: 92
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.09** (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *66 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-1 DUP 1-2
Date Sampled: 05/02/24 11:30
Percent Solids: 86
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: F-1 1-2
Date Sampled: 05/02/24 12:00
Percent Solids: 89
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *69 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *69 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1 1-2
Date Sampled: 05/02/24 11:45
Percent Solids: 87
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-1 1-2
Date Sampled: 05/02/24 11:30
Percent Solids: 85
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.07** (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1260 [2C] | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 4-5
Date Sampled: 05/02/24 13:10
Percent Solids: 85
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| **Aroclor 1254** | **0.3** (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| **Aroclor 1260** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *69 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1 4-5
Date Sampled: 05/02/24 11:45
Percent Solids: 86
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| **Aroclor 1254** | **0.8** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| **Aroclor 1260 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *70 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *63 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-1 4-5
Date Sampled: 05/02/24 11:30
Percent Solids: 88
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| **Aroclor 1248 [2C]** | **0.07** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| **Aroclor 1254** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE41057 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0172* | | mg/kg wet | *0.02500* | | *69* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0164* | | mg/kg wet | *0.02500* | | *66* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0156* | | mg/kg wet | *0.02500* | | *62* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0165* | | mg/kg wet | *0.02500* | | *66* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 63 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 63 | 40-140 | | | |
| Aroclor 1260 | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 64 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 64 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0160* | | mg/kg wet | *0.02500* | | *64* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0154* | | mg/kg wet | *0.02500* | | *61* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0150* | | mg/kg wet | *0.02500* | | *60* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0148* | | mg/kg wet | *0.02500* | | *59* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 75 | 40-140 | 17 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 74 | 40-140 | 16 | 30 | |
| Aroclor 1260 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 78 | 40-140 | 20 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 75 | 40-140 | 16 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0189* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0180* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0178* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| **Batch DE41411 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE41411 - 3540C** | | | | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 96 | 40-140 | 2 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | 1 | 30 | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | 0.1 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | 0.3 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0125
Date Received: 5/3/2024
Project Due Date: 5/10/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered — Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 544459 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 544460 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 544461 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 544462 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 544463 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 544464 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 544465 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 8 | 544466 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 9 | 544467 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 10 | 544468 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 11 | 544469 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 12 | 544470 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 13 | 544471 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 14 | 544472 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 15 | 544473 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 16 | 544474 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 17 | 544475 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials MA

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24E0125

Date Received: 5/3/2024

| | |
|---|---|
| Are barcode labels on correct containers? | (Yes) / No |
| Are all Flashpoint stickers attached/container ID # circled? | Yes / No / NA |
| Are all Hex Chrome stickers attached? | Yes / No / NA |
| Are all QC stickers attached? | Yes / No / NA |
| Are VOA stickers attached if bubbles noted? | Yes / No / NA |

Completed By: [signature] Date & Time: 5/3/24 1809

Reviewed By: [signature] Date & Time: 5/3/24 1855

5 of 5

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24E0125

| | | | |
|---|---|---|---|
| **Turn Time** | 5 | Days | |
| **Regulatory State** | Massachusetts | | |
| **Reporting Limits** | MA LF | | |

**Is this project for any of the following?:** ○ CT RCP ◉ MA MCP ○ RGP

**Electonic Deliverables:** ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB |
|---|---|---|---|---|---|---|
| 1 | 5-2-24 | 1030 | Grab | Soil | ~~BB2~~ C-5 4-5 | X |
| 2 | " | 1045 | Grab | Soil | C-6 1-2 | X |
| 3 | " | 1030 | Grab | Soil | C-5 1-2 | X |
| 4 | " | 1010 | Grab | Soil | C-3 1-2 | X |
| 5 | " | 0950 | Grab | Soil | C-1 1-2 | X |
| 6 | " | 1010 | Grab | Soil | ~~BB2~~ C-3 4-5 | X |
| 7 | " | 1105 | Grab | Soil | D-4 1-2 | X |
| 8 | " | 1110 | Grab | Soil | D-2 1-2 | X |
| 9 | " | 1105 | Grab | Soil | ~~BB2~~ D-4 4-5 | X |
| 10 | " | 1310 | Grab | Soil | E-1 1-2 | X |

**Container Type:** AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — AG

**Container Volume:** 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10

**Preservation Code:** 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1

**Number of Containers per Sample:**

**Laboratory Use Only**

Cooler Present: yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C IR

**Sampled by :**

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-3-24 1130 | 5/3/24 11:36 | 5/3/24 12:45 | 5/3/24 1721 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
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www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 24E0125

Turn Time: 5 Days
Regulatory State: Massachusetts
Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP
Reporting Limits: MA LF
Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis: PCB, HOLD

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | HOLD |
|---|---|---|---|---|---|---|---|
| 11 | 5-2-24 | 1130 | Grab | Soil | ~~F-1 1-2~~ H-1 DUP 1-2 | X | |
| 12 | " | 1200 | Grab | Soil | F-1 1-2 | X | |
| — | " | 1130 | Grab | Soil | ~~G-1 1-2~~ H-1 DUP 4-5 | ■ | X |
| 13 | " | 1145 | Grab | Soil | G-1 1-2 | X | |
| 14 | " | 1130 | Grab | Soil | H-1 1-2 | X | |
| 15 | " | 1310 | Grab | Soil | E-1 4-5 | X | |
| 16 | " | 1145 | Grab | Soil | G-1 4-5 | X | |
| 17 | " | 1130 | Grab | Soil | H-1 4-5 | X | |
| | | | Grab | Soil | | | |
| | | | Grab | Soil | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | | |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 |
| | | | | | | | | | | | **Number of Containers per Sample:** | |

**Laboratory Use Only**
Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C 1a

**Sampled by :**

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-3-24 1130 | 5/3/24 11:34 | 5/3/24 17:10 | 5/3/24 17:20 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E0125**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
***By ESS Laboratory at 2:00 pm, May 31, 2024***

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## SAMPLE RECEIPT

The following samples were received on May 03, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Revision 1 May 31, 2024: This report has been revised to include total lead on sample -10 and -15, per client.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E0125-01 | C-5 4-5 | Soil | 8082A |
| 24E0125-02 | C-6 1-2 | Soil | 8082A |
| 24E0125-03 | C-5 1-2 | Soil | 8082A |
| 24E0125-04 | C-3 1-2 | Soil | 8082A |
| 24E0125-05 | C-1 1-2 | Soil | 8082A |
| 24E0125-06 | C-3 4-5 | Soil | 8082A |
| 24E0125-07 | D-4 1-2 | Soil | 8082A |
| 24E0125-08 | D-2 1-2 | Soil | 8082A |
| 24E0125-09 | D-4 4-5 | Soil | 8082A |
| 24E0125-10 | E-1 1-2 | Soil | 6010D, 8082A |
| 24E0125-11 | H-1 DUP 1-2 | Soil | 8082A |
| 24E0125-12 | F-1 1-2 | Soil | 8082A |
| 24E0125-13 | G-1 1-2 | Soil | 8082A |
| 24E0125-14 | H-1 1-2 | Soil | 8082A |
| 24E0125-15 | E-1 4-5 | Soil | 6010D, 8082A |
| 24E0125-16 | G-1 4-5 | Soil | 8082A |
| 24E0125-17 | H-1 4-5 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## PROJECT NARRATIVE

**No observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E0125-01 through 24E0125-17**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes (x) No ( )* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: May 16, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5 4-5
Date Sampled: 05/02/24 10:30
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| **Aroclor 1254** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *93 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-6 1-2
Date Sampled: 05/02/24 10:45
Percent Solids: 95
Initial Volume: 19.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5 1-2
Date Sampled: 05/02/24 10:30
Percent Solids: 92
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *87 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *87 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3 1-2
Date Sampled: 05/02/24 10:10
Percent Solids: 94
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1 1-2
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 20.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3 4-5
Date Sampled: 05/02/24 10:10
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1254 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-4 1-2
Date Sampled: 05/02/24 11:05
Percent Solids: 95
Initial Volume: 20.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| **Aroclor 1254 [2C]** | **0.09** (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *79 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-2 1-2
Date Sampled: 05/02/24 11:10
Percent Solids: 91
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *84 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-4 4-5
Date Sampled: 05/02/24 11:05
Percent Solids: 94
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1260 [2C] | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 1-2
Date Sampled: 05/02/24 13:10
Percent Solids: 92

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-10
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **340** (3.90) | --- | 6010D | --- | 1 | KJB | 05/24/24 14:12 | 2.8 100 | DE42410 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 1-2
Date Sampled: 05/02/24 13:10
Percent Solids: 92
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.09** (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *66 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-1 DUP 1-2
Date Sampled: 05/02/24 11:30
Percent Solids: 86
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: F-1 1-2
Date Sampled: 05/02/24 12:00
Percent Solids: 89
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *69 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *69 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1 1-2
Date Sampled: 05/02/24 11:45
Percent Solids: 87
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-1 1-2
Date Sampled: 05/02/24 11:30
Percent Solids: 85
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.07** (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1260 [2C] | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 4-5
Date Sampled: 05/02/24 13:10
Percent Solids: 85

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-15
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **1890** (4.41) | --- | 6010D | --- | 1 | KJB | 05/24/24 14:14 | 2.67 100 | DE42410 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 4-5
Date Sampled: 05/02/24 13:10
Percent Solids: 85
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| **Aroclor 1254** | **0.3** (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| **Aroclor 1260** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *69 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1 4-5
Date Sampled: 05/02/24 11:45
Percent Solids: 86
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| **Aroclor 1254** | **0.8** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| **Aroclor 1260 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *70 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *63 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-1 4-5
Date Sampled: 05/02/24 11:30
Percent Solids: 88
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| **Aroclor 1248 [2C]** | **0.07** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| **Aroclor 1254** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DE42410 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 174 | 16.7 | mg/kg wet | 225.0 | | 77 | 72-128 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 163 | 15.4 | mg/kg wet | 225.0 | | 72 | 72-128 | 6 | 30 | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE41057 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0172* | | mg/kg wet | *0.02500* | | *69* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0164* | | mg/kg wet | *0.02500* | | *66* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0156* | | mg/kg wet | *0.02500* | | *62* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0165* | | mg/kg wet | *0.02500* | | *66* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 63 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 63 | 40-140 | | | |
| Aroclor 1260 | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 64 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 64 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0160* | | mg/kg wet | *0.02500* | | *64* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0154* | | mg/kg wet | *0.02500* | | *61* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0150* | | mg/kg wet | *0.02500* | | *60* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0148* | | mg/kg wet | *0.02500* | | *59* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE41057 - 3540C** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 75 | 40-140 | 17 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 74 | 40-140 | 16 | 30 | |
| Aroclor 1260 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 78 | 40-140 | 20 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 75 | 40-140 | 16 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0189* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0180* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0178* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| **Batch DE41411 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 96 | 40-140 | 2 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | 1 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE41411 - 3540C** | | | | | | | | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | 0.1 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | 0.3 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| R- | Standard Reference Material is biased low (R-). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0125
Date Received: 5/3/2024
Project Due Date: 5/10/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 544459 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 544460 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 544461 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 544462 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 544463 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 544464 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 544465 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 8 | 544466 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 9 | 544467 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 10 | 544468 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 11 | 544469 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 12 | 544470 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 13 | 544471 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 14 | 544472 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 15 | 544473 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 16 | 544474 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 17 | 544475 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials MA

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24E0125

Date Received: 5/3/2024

| | |
|---|---|
| Are barcode labels on correct containers? | (Yes) / No |
| Are all Flashpoint stickers attached/container ID # circled? | Yes / No / NA |
| Are all Hex Chrome stickers attached? | Yes / No / NA |
| Are all QC stickers attached? | Yes / No / NA |
| Are VOA stickers attached if bubbles noted? | Yes / No / NA |

Completed By: [signature] Date & Time: 5/3/24 1809

Reviewed By: [signature] Date & Time: 5/3/24 1855

5 of 5

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24E0125

| | | | |
|---|---|---|---|
| Turn Time | 5 | Days | |
| Regulatory State | Massachusetts | | |
| Reporting Limits | MA LF | | |

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis: PCB; total Pb -JA 5/23/24

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | total Pb -JA 5/23/24 |
|---|---|---|---|---|---|---|---|
| 1 | 5-2-24 | 1030 | Grab | Soil | ~~C-5~~ C-5 4-5 | X | |
| 2 | " | 1045 | Grab | Soil | C-6 1-2 | X | |
| 3 | " | 1030 | Grab | Soil | C-5 1-2 | X | |
| 4 | " | 1010 | Grab | Soil | C-3 1-2 | X | |
| 5 | " | 0950 | Grab | Soil | C-1 1-2 | X | |
| 6 | " | 1010 | Grab | Soil | ~~C-3~~ C-3 4-5 | X | |
| 7 | " | 1105 | Grab | Soil | D-4 1-2 | X | |
| 8 | " | 1110 | Grab | Soil | D-2 1-2 | X | |
| 9 | " | 1105 | Grab | Soil | ~~D-4~~ D-4 4-5 | X | |
| 10 | " | 1310 | Grab | Soil | E-1 1-2 | X | X |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type: | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | | |
| Container Volume: | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 |
| Preservation Code: | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 |
| | | | | | | | | | | Number of Containers per Sample: | | |

**Laboratory Use Only**

Cooler Present: yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C IR

Sampled by :

Comments: Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-3-24 1130 | 5/3/24 11:36 | 5/3/24 12:45 | 5/3/24 1721 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
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www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 24E0125

| | | | |
|---|---|---|---|
| Turn Time | 5 | Days | |
| Regulatory State | Massachusetts | | |
| Reporting Limits | MA LF | | |

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis: PCB; HOLD; Total Pb - JA 5/23/24

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | HOLD | Total Pb - JA 5/23/24 |
|---|---|---|---|---|---|---|---|---|
| 11 | 5-2-24 | 1130 | Grab | Soil | ~~F-1 1-2~~ H-1 DUP 1-2 | X | | |
| 12 | " | 1200 | Grab | Soil | F-1 1-2 | X | | |
| — | " | 1130 | Grab | Soil | ~~G-1 1-2~~ H-1 DUP 4-5 | ■ | X | |
| 13 | " | 1145 | Grab | Soil | G-1 1-2 | X | | |
| 14 | " | 1130 | Grab | Soil | H-1 1-2 | X | | |
| 15 | " | 1310 | Grab | Soil | E-1 4-5 | X | | X |
| 16 | " | 1145 | Grab | Soil | G-1 4-5 | X | | |
| 17 | " | 1130 | Grab | Soil | H-1 4-5 | X | | |
| | | | Grab | Soil | | | | |
| | | | Grab | Soil | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 | |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 | |
| | | | | | | | | | | **Number of Containers per Sample:** | | | |

**Laboratory Use Only**

Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C 1a

**Sampled by :**

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-3-24 1130 | 5/3/24 11:34 | 5/3/24 17:10 | 5/3/24 17:20 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E0125**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
***By ESS Laboratory at 2:00 pm, May 31, 2024***

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## SAMPLE RECEIPT

The following samples were received on May 03, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Revision 1 May 31, 2024: This report has been revised to include total lead on sample -10 and -15, per client.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E0125-01 | C-5 4-5 | Soil | 8082A |
| 24E0125-02 | C-6 1-2 | Soil | 8082A |
| 24E0125-03 | C-5 1-2 | Soil | 8082A |
| 24E0125-04 | C-3 1-2 | Soil | 8082A |
| 24E0125-05 | C-1 1-2 | Soil | 8082A |
| 24E0125-06 | C-3 4-5 | Soil | 8082A |
| 24E0125-07 | D-4 1-2 | Soil | 8082A |
| 24E0125-08 | D-2 1-2 | Soil | 8082A |
| 24E0125-09 | D-4 4-5 | Soil | 8082A |
| 24E0125-10 | E-1 1-2 | Soil | 6010D, 8082A |
| 24E0125-11 | H-1 DUP 1-2 | Soil | 8082A |
| 24E0125-12 | F-1 1-2 | Soil | 8082A |
| 24E0125-13 | G-1 1-2 | Soil | 8082A |
| 24E0125-14 | H-1 1-2 | Soil | 8082A |
| 24E0125-15 | E-1 4-5 | Soil | 6010D, 8082A |
| 24E0125-16 | G-1 4-5 | Soil | 8082A |
| 24E0125-17 | H-1 4-5 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## PROJECT NARRATIVE

**No observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E0125-01 through 24E0125-17**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes (x) No ( )* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: May 16, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5 4-5
Date Sampled: 05/02/24 10:30
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| **Aroclor 1254** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *93 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-6 1-2
Date Sampled: 05/02/24 10:45
Percent Solids: 95
Initial Volume: 19.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5 1-2
Date Sampled: 05/02/24 10:30
Percent Solids: 92
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *87 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *87 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3 1-2
Date Sampled: 05/02/24 10:10
Percent Solids: 94
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1 1-2
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 20.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3 4-5
Date Sampled: 05/02/24 10:10
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1254 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-4 1-2
Date Sampled: 05/02/24 11:05
Percent Solids: 95
Initial Volume: 20.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| **Aroclor 1254 [2C]** | **0.09** (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *79 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-2 1-2
Date Sampled: 05/02/24 11:10
Percent Solids: 91
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *84 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-4 4-5
Date Sampled: 05/02/24 11:05
Percent Solids: 94
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1260 [2C] | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 1-2
Date Sampled: 05/02/24 13:10
Percent Solids: 92

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-10
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **340** (3.90) | --- | 6010D | --- | 1 | KJB | 05/24/24 14:12 | 2.8 100 | DE42410 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 1-2
Date Sampled: 05/02/24 13:10
Percent Solids: 92
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.09** (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *66 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-1 DUP 1-2
Date Sampled: 05/02/24 11:30
Percent Solids: 86
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: F-1 1-2
Date Sampled: 05/02/24 12:00
Percent Solids: 89
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *69 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *69 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1 1-2
Date Sampled: 05/02/24 11:45
Percent Solids: 87
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-1 1-2
Date Sampled: 05/02/24 11:30
Percent Solids: 85
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.07** (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1260 [2C] | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 4-5
Date Sampled: 05/02/24 13:10
Percent Solids: 85

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-15
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **1890** (4.41) | --- | 6010D | --- | 1 | KJB | 05/24/24 14:14 | 2.67 100 | DE42410 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 4-5
Date Sampled: 05/02/24 13:10
Percent Solids: 85
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| **Aroclor 1254** | **0.3** (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| **Aroclor 1260** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *69 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1 4-5
Date Sampled: 05/02/24 11:45
Percent Solids: 86
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| **Aroclor 1254** | **0.8** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| **Aroclor 1260 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *70 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *63 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-1 4-5
Date Sampled: 05/02/24 11:30
Percent Solids: 88
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| **Aroclor 1248 [2C]** | **0.07** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| **Aroclor 1254** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DE42410 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 174 | 16.7 | mg/kg wet | 225.0 | | 77 | 72-128 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 163 | 15.4 | mg/kg wet | 225.0 | | 72 | 72-128 | 6 | 30 | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE41057 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0172* | | mg/kg wet | *0.02500* | | *69* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0164* | | mg/kg wet | *0.02500* | | *66* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0156* | | mg/kg wet | *0.02500* | | *62* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0165* | | mg/kg wet | *0.02500* | | *66* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 63 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 63 | 40-140 | | | |
| Aroclor 1260 | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 64 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 64 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0160* | | mg/kg wet | *0.02500* | | *64* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0154* | | mg/kg wet | *0.02500* | | *61* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0150* | | mg/kg wet | *0.02500* | | *60* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0148* | | mg/kg wet | *0.02500* | | *59* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE41057 - 3540C** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 75 | 40-140 | 17 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 74 | 40-140 | 16 | 30 | |
| Aroclor 1260 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 78 | 40-140 | 20 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 75 | 40-140 | 16 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0189* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0180* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0178* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| **Batch DE41411 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 96 | 40-140 | 2 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | 1 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE41411 - 3540C** | | | | | | | | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | 0.1 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | 0.3 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| R- | Standard Reference Material is biased low (R-). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0125
Date Received: 5/3/2024
Project Due Date: 5/10/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 544459 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 544460 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 544461 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 544462 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 544463 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 544464 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 544465 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 8 | 544466 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 9 | 544467 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 10 | 544468 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 11 | 544469 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 12 | 544470 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 13 | 544471 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 14 | 544472 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 15 | 544473 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 16 | 544474 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 17 | 544475 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials MA

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24E0125

Date Received: 5/3/2024

| | |
|---|---|
| Are barcode labels on correct containers? | (Yes) / No |
| Are all Flashpoint stickers attached/container ID # circled? | Yes / No / NA |
| Are all Hex Chrome stickers attached? | Yes / No / NA |
| Are all QC stickers attached? | Yes / No / NA |
| Are VOA stickers attached if bubbles noted? | Yes / No / NA |

Completed By: [signature] Date & Time: 5/3/24 1809

Reviewed By: [signature] Date & Time: 5/3/24 1855

5 of 5

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24E0125

| | | | |
|---|---|---|---|
| Turn Time | 5 | Days | |
| Regulatory State | Massachusetts | | |
| Reporting Limits | MA LF | | |

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis: PCB; total Pb -JA 5/23/24

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | total Pb -JA 5/23/24 |
|---|---|---|---|---|---|---|---|
| 1 | 5-2-24 | 1030 | Grab | Soil | ~~C-5~~ C-5 4-5 | X | |
| 2 | " | 1045 | Grab | Soil | C-6 1-2 | X | |
| 3 | " | 1030 | Grab | Soil | C-5 1-2 | X | |
| 4 | " | 1010 | Grab | Soil | C-3 1-2 | X | |
| 5 | " | 0950 | Grab | Soil | C-1 1-2 | X | |
| 6 | " | 1010 | Grab | Soil | ~~C-3~~ C-3 4-5 | X | |
| 7 | " | 1105 | Grab | Soil | D-4 1-2 | X | |
| 8 | " | 1110 | Grab | Soil | D-2 1-2 | X | |
| 9 | " | 1105 | Grab | Soil | ~~D-4~~ D-4 4-5 | X | |
| 10 | " | 1310 | Grab | Soil | E-1 1-2 | X | X |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type: | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | | |
| Container Volume: | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 |
| Preservation Code: | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 |
| | | | | | | | | | | Number of Containers per Sample: | | |

**Laboratory Use Only**

Cooler Present: yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C IR

Sampled by :

Comments: Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-3-24 1130 | 5/3/24 11:36 | 5/3/24 12:45 | 5/3/24 1721 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
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www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 24E0125

| | | | |
|---|---|---|---|
| Turn Time | 5 | Days | |
| Regulatory State | Massachusetts | | |
| Reporting Limits | MA LF | | |

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis: PCB; HOLD; Total Pb - JA 5/23/24

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | HOLD | Total Pb - JA 5/23/24 |
|---|---|---|---|---|---|---|---|---|
| 11 | 5-2-24 | 1130 | Grab | Soil | ~~F-1 1-2~~ H-1 DUP 1-2 | X | | |
| 12 | " | 1200 | Grab | Soil | F-1 1-2 | X | | |
| — | " | 1130 | Grab | Soil | ~~G-1 1-2~~ H-1 DUP 4-5 | ■ | X | |
| 13 | " | 1145 | Grab | Soil | G-1 1-2 | X | | |
| 14 | " | 1130 | Grab | Soil | H-1 1-2 | X | | |
| 15 | " | 1310 | Grab | Soil | E-1 4-5 | X | | X |
| 16 | " | 1145 | Grab | Soil | G-1 4-5 | X | | |
| 17 | " | 1130 | Grab | Soil | H-1 4-5 | X | | |
| | | | Grab | Soil | | | | |
| | | | Grab | Soil | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 | |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 | |
| | | | | | | | | | | **Number of Containers per Sample:** | | | |

**Laboratory Use Only**

Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C 1a

**Sampled by :**

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-3-24 1130 | 5/3/24 11:34 | 5/3/24 17:10 | 5/3/24 17:20 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E0125**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

***REVIEWED***
***By ESS Laboratory at 1:28 pm, Jun 06, 2024***

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## SAMPLE RECEIPT

The following samples were received on May 03, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Revision 1 May 31, 2024: This report has been revised to include total lead on sample -10 and -15, per client.**

**Revision 2 June 6, 2024: This report has been revised to include total lead on sample -16.**

**Question I: All samples for metals were analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E0125-01 | C-5 4-5 | Soil | 8082A |
| 24E0125-02 | C-6 1-2 | Soil | 8082A |
| 24E0125-03 | C-5 1-2 | Soil | 8082A |
| 24E0125-04 | C-3 1-2 | Soil | 8082A |
| 24E0125-05 | C-1 1-2 | Soil | 8082A |
| 24E0125-06 | C-3 4-5 | Soil | 8082A |
| 24E0125-07 | D-4 1-2 | Soil | 8082A |
| 24E0125-08 | D-2 1-2 | Soil | 8082A |
| 24E0125-09 | D-4 4-5 | Soil | 8082A |
| 24E0125-10 | E-1 1-2 | Soil | 6010D, 8082A |
| 24E0125-11 | H-1 DUP 1-2 | Soil | 8082A |
| 24E0125-12 | F-1 1-2 | Soil | 8082A |
| 24E0125-13 | G-1 1-2 | Soil | 8082A |
| 24E0125-14 | H-1 1-2 | Soil | 8082A |
| 24E0125-15 | E-1 4-5 | Soil | 6010D, 8082A |
| 24E0125-16 | G-1 4-5 | Soil | 6010D, 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

| | | | |
|---|---|---|---|
| 24E0125-17 | H-1 4-5 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## PROJECT NARRATIVE

**Total Metals**
DE42410-SRM1 **Standard Reference Material is biased low (R-).**
Lead (68% @ 81-120%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E0125-01 through 24E0125-17**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (x)* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: June 06, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5 4-5
Date Sampled: 05/02/24 10:30
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| **Aroclor 1254** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *93 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-6 1-2
Date Sampled: 05/02/24 10:45
Percent Solids: 95
Initial Volume: 19.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5 1-2
Date Sampled: 05/02/24 10:30
Percent Solids: 92
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *87 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *87 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3 1-2
Date Sampled: 05/02/24 10:10
Percent Solids: 94
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1 1-2
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 20.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3 4-5
Date Sampled: 05/02/24 10:10
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1254 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-4 1-2
Date Sampled: 05/02/24 11:05
Percent Solids: 95
Initial Volume: 20.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| **Aroclor 1254 [2C]** | **0.09** (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *79 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-2 1-2
Date Sampled: 05/02/24 11:10
Percent Solids: 91
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *84 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-4 4-5
Date Sampled: 05/02/24 11:05
Percent Solids: 94
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1260 [2C] | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 1-2
Date Sampled: 05/02/24 13:10
Percent Solids: 92

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-10
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **340** (3.90) | --- | 6010D | --- | 1 | KJB | 05/24/24 14:12 | 2.8 100 | DE42410 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 1-2
Date Sampled: 05/02/24 13:10
Percent Solids: 92
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.09** (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *66 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-1 DUP 1-2
Date Sampled: 05/02/24 11:30
Percent Solids: 86
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: F-1 1-2
Date Sampled: 05/02/24 12:00
Percent Solids: 89
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *69 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *69 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1 1-2
Date Sampled: 05/02/24 11:45
Percent Solids: 87
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-1 1-2
Date Sampled: 05/02/24 11:30
Percent Solids: 85
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.07** (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1260 [2C] | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 4-5
Date Sampled: 05/02/24 13:10
Percent Solids: 85

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-15
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **1890** (4.41) | --- | 6010D | --- | 1 | KJB | 05/24/24 14:14 | 2.67 100 | DE42410 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 4-5
Date Sampled: 05/02/24 13:10
Percent Solids: 85
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| **Aroclor 1254** | **0.3** (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| **Aroclor 1260** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *69 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1 4-5
Date Sampled: 05/02/24 11:45
Percent Solids: 86

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-16
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **5420** (432) | --- | 6010D | --- | 100 | KJB | 06/05/24 11:55 | 2.7 100 | DF40408 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1 4-5
Date Sampled: 05/02/24 11:45
Percent Solids: 86
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| **Aroclor 1254** | **0.8** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| **Aroclor 1260 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *70 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *63 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-1 4-5
Date Sampled: 05/02/24 11:30
Percent Solids: 88
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| **Aroclor 1248 [2C]** | **0.07** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| **Aroclor 1254** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DE42410 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 174 | 16.7 | mg/kg wet | 225.0 | | 77 | 72-128 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 163 | 15.4 | mg/kg wet | 225.0 | | 72 | 72-128 | 6 | 30 | |
| **Reference** | | | | | | | | | | |
| Lead | 3050 | 76.9 | mg/kg wet | 4490 | | 68 | 81-120 | | | R- |
| **Batch DF40408 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 204 | 16.7 | mg/kg wet | 225.0 | | 91 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 207 | 16.7 | mg/kg wet | 225.0 | | 92 | 80-120 | 2 | 30 | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE41057 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0172* | | mg/kg wet | *0.02500* | | *69* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0164* | | mg/kg wet | *0.02500* | | *66* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0156* | | mg/kg wet | *0.02500* | | *62* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0165* | | mg/kg wet | *0.02500* | | *66* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 63 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE41057 - 3540C** | | | | | | | | | | |
| Aroclor 1016 [2C] | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 63 | 40-140 | | | |
| Aroclor 1260 | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 64 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 64 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0160* | | mg/kg wet | *0.02500* | | *64* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0154* | | mg/kg wet | *0.02500* | | *61* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0150* | | mg/kg wet | *0.02500* | | *60* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0148* | | mg/kg wet | *0.02500* | | *59* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 75 | 40-140 | 17 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 74 | 40-140 | 16 | 30 | |
| Aroclor 1260 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 78 | 40-140 | 20 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 75 | 40-140 | 16 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0189* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0180* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0178* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| **Batch DE41411 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE41411 - 3540C** | | | | | | | | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 96 | 40-140 | 2 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | 1 | 30 | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | 0.1 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | 0.3 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| R- | Standard Reference Material is biased low (R-). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0125
Date Received: 5/3/2024
Project Due Date: 5/10/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 544459 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 544460 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 544461 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 544462 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 544463 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 544464 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 544465 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 8 | 544466 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 9 | 544467 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 10 | 544468 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 11 | 544469 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 12 | 544470 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 13 | 544471 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 14 | 544472 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 15 | 544473 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 16 | 544474 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 17 | 544475 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials MA

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24E0125

Date Received: 5/3/2024

| | |
|---|---|
| Are barcode labels on correct containers? | (Yes) / No |
| Are all Flashpoint stickers attached/container ID # circled? | Yes / No / NA |
| Are all Hex Chrome stickers attached? | Yes / No / NA |
| Are all QC stickers attached? | Yes / No / NA |
| Are VOA stickers attached if bubbles noted? | Yes / No / NA |

Completed By: [signature] Date & Time: 5/3/24 1809

Reviewed By: [signature] Date & Time: 5/3/24 1855

5 of 5

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24E0125

| | | | |
|---|---|---|---|
| Turn Time | 5 | Days | |
| Regulatory State | Massachusetts | | |
| Reporting Limits | MA LF | | |

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis: PCB; total Pb -JA 5/23/24

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | total Pb -JA 5/23/24 |
|---|---|---|---|---|---|---|---|
| 1 | 5-2-24 | 1030 | Grab | Soil | ~~C-5~~ C-5 4-5 | X | |
| 2 | " | 1045 | Grab | Soil | C-6 1-2 | X | |
| 3 | " | 1030 | Grab | Soil | C-5 1-2 | X | |
| 4 | " | 1010 | Grab | Soil | C-3 1-2 | X | |
| 5 | " | 0950 | Grab | Soil | C-1 1-2 | X | |
| 6 | " | 1010 | Grab | Soil | ~~C-3~~ C-3 4-5 | X | |
| 7 | " | 1105 | Grab | Soil | D-4 1-2 | X | |
| 8 | " | 1110 | Grab | Soil | D-2 1-2 | X | |
| 9 | " | 1105 | Grab | Soil | ~~D-4~~ D-4 4-5 | X | |
| 10 | " | 1310 | Grab | Soil | E-1 1-2 | X | X |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type: | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | | |
| Container Volume: | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 |
| Preservation Code: | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 |
| | | | | | | | | | | Number of Containers per Sample: | | |

**Laboratory Use Only**

Cooler Present: yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C IR

Sampled by :

Comments: Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-3-24 1130 | 5/3/24 11:36 | 5/3/24 12:45 | 5/3/24 1721 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
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# CHAIN OF CUSTODY

ESS Lab # 24E0125

| | | | |
|---|---|---|---|
| Turn Time | 5 | Days | |
| Regulatory State | Massachusetts | | |
| Reporting Limits | MA LF | | |

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis: PCB; HOLD; Total Pb - JA 5/23/24

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | HOLD | Total Pb - JA 5/23/24 |
|---|---|---|---|---|---|---|---|---|
| 11 | 5-2-24 | 1130 | Grab | Soil | ~~F-1 1-2~~ H-1 DUP 1-2 | X | | |
| 12 | " | 1200 | Grab | Soil | F-1 1-2 | X | | |
| — | " | 1130 | Grab | Soil | ~~G-1 1-2~~ H-1 DUP 4-5 | ■ | X | |
| 13 | " | 1145 | Grab | Soil | G-1 1-2 | X | | |
| 14 | " | 1130 | Grab | Soil | H-1 1-2 | X | | |
| 15 | " | 1310 | Grab | Soil | E-1 4-5 | X | | X |
| 16 | " | 1145 | Grab | Soil | G-1 4-5 | X | | X - JA 6/3/2024 Rev2 |
| 17 | " | 1130 | Grab | Soil | H-1 4-5 | X | | |
| | | | Grab | Soil | | | | |
| | | | Grab | Soil | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type: | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | |
| Container Volume: | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 | |
| Preservation Code: | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 | |
| | | | | | | | | | | Number of Containers per Sample: | | | |

**Laboratory Use Only**

Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C 1a

Sampled by :

Comments: Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-3-24 1130 | 5/3/24 11:34 | 5/3/24 17:10 | 5/3/24 17:20 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E0125**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 1:15 pm, Jun 13, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## SAMPLE RECEIPT

The following samples were received on May 03, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Revision 1 May 31, 2024: This report has been revised to include total lead on sample -10 and -15, per client.**

**Revision 2 June 6, 2024: This report has been revised to include total lead on sample -16.**

**Revision 3 June 13, 2024: This report has been revised to include total lead on samples -09 and -17.**

**Question I: All samples for metals were analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E0125-01 | C-5 4-5 | Soil | 8082A |
| 24E0125-02 | C-6 1-2 | Soil | 8082A |
| 24E0125-03 | C-5 1-2 | Soil | 8082A |
| 24E0125-04 | C-3 1-2 | Soil | 8082A |
| 24E0125-05 | C-1 1-2 | Soil | 8082A |
| 24E0125-06 | C-3 4-5 | Soil | 8082A |
| 24E0125-07 | D-4 1-2 | Soil | 8082A |
| 24E0125-08 | D-2 1-2 | Soil | 8082A |
| 24E0125-09 | D-4 4-5 | Soil | 6010D, 8082A |
| 24E0125-10 | E-1 1-2 | Soil | 6010D, 8082A |
| 24E0125-11 | H-1 DUP 1-2 | Soil | 8082A |
| 24E0125-12 | F-1 1-2 | Soil | 8082A |
| 24E0125-13 | G-1 1-2 | Soil | 8082A |
| 24E0125-14 | H-1 1-2 | Soil | 8082A |
| 24E0125-15 | E-1 4-5 | Soil | 6010D, 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

| | | | |
|---|---|---|---|
| 24E0125-16 | G-1 4-5 | Soil | 6010D, 8082A |
| 24E0125-17 | H-1 4-5 | Soil | 6010D, 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## PROJECT NARRATIVE

**Total Metals**
DE42410-SRM1 **Standard Reference Material is biased low (R-).**
Lead (68% @ 81-120%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E0125-01 through 24E0125-17**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (x)* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: June 06, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5 4-5
Date Sampled: 05/02/24 10:30
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| **Aroclor 1254** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:26 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *93 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-6 1-2
Date Sampled: 05/02/24 10:45
Percent Solids: 95
Initial Volume: 19.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 18:46 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-5 1-2
Date Sampled: 05/02/24 10:30
Percent Solids: 92
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:05 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *87 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *87 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3 1-2
Date Sampled: 05/02/24 10:10
Percent Solids: 94
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:25 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1 1-2
Date Sampled: 05/02/24 09:50
Percent Solids: 91
Initial Volume: 20.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 19:44 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-3 4-5
Date Sampled: 05/02/24 10:10
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1254 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/13/24 20:04 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-4 1-2
Date Sampled: 05/02/24 11:05
Percent Solids: 95
Initial Volume: 20.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/11/24 12:45

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| **Aroclor 1254 [2C]** | **0.09** (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/13/24 20:23 | --- | DE41057 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *79 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-2 1-2
Date Sampled: 05/02/24 11:10
Percent Solids: 91
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 19:56 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *84 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-4 4-5
Date Sampled: 05/02/24 11:05
Percent Solids: 94

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-09
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **411** (3.66) | --- | 6010D | --- | 1 | KJB | 06/10/24 23:44 | 2.91 100 | DF41009 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D-4 4-5
Date Sampled: 05/02/24 11:05
Percent Solids: 94
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1260 [2C] | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/15/24 20:16 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 1-2
Date Sampled: 05/02/24 13:10
Percent Solids: 92

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-10
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **340** (3.90) | --- | 6010D | --- | 1 | KJB | 05/24/24 14:12 | 2.8 100 | DE42410 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 1-2
Date Sampled: 05/02/24 13:10
Percent Solids: 92
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.09** (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:36 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *66 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-1 DUP 1-2
Date Sampled: 05/02/24 11:30
Percent Solids: 86
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 20:55 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: F-1 1-2
Date Sampled: 05/02/24 12:00
Percent Solids: 89
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:15 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *69 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *69 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1 1-2
Date Sampled: 05/02/24 11:45
Percent Solids: 87
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:34 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-1 1-2
Date Sampled: 05/02/24 11:30
Percent Solids: 85
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.07** (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1260 [2C] | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 21:54 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *75 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 4-5
Date Sampled: 05/02/24 13:10
Percent Solids: 85

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-15
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **1890** (4.41) | --- | 6010D | --- | 1 | KJB | 05/24/24 14:14 | 2.67 100 | DE42410 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 4-5
Date Sampled: 05/02/24 13:10
Percent Solids: 85
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| **Aroclor 1254** | **0.3** (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| **Aroclor 1260** | **0.1** (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/15/24 22:13 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *69 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1 4-5
Date Sampled: 05/02/24 11:45
Percent Solids: 86

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-16
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **5420** (432) | --- | 6010D | --- | 100 | KJB | 06/05/24 11:55 | 2.7 100 | DF40408 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1 4-5
Date Sampled: 05/02/24 11:45
Percent Solids: 86
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| **Aroclor 1254** | **0.8** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| **Aroclor 1260 [2C]** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:30 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *70 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *63 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-1 4-5
Date Sampled: 05/02/24 11:30
Percent Solids: 88

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-17
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **89.4** (8.59) | --- | 6010D | --- | 2 | KJB | 06/11/24 13:22 | 2.66 100 | DF41009 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-1 4-5
Date Sampled: 05/02/24 11:30
Percent Solids: 88
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0125
ESS Laboratory Sample ID: 24E0125-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| **Aroclor 1248 [2C]** | **0.07** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| **Aroclor 1254** | **0.2** (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 0:49 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DE42410 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 174 | 16.7 | mg/kg wet | 225.0 | | 77 | 72-128 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 163 | 15.4 | mg/kg wet | 225.0 | | 72 | 72-128 | 6 | 30 | |
| **Reference** | | | | | | | | | | |
| Lead | 3050 | 76.9 | mg/kg wet | 4490 | | 68 | 81-120 | | | R- |
| **Batch DF40408 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 204 | 16.7 | mg/kg wet | 225.0 | | 91 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 207 | 16.7 | mg/kg wet | 225.0 | | 92 | 80-120 | 2 | 30 | |
| **Batch DF41009 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 168 | 16.7 | mg/kg wet | 225.0 | | 74 | 72-128 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 197 | 16.4 | mg/kg wet | 225.0 | | 87 | 72-128 | 16 | 30 | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE41057 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE41057 - 3540C** | | | | | | | | | | |
| Aroclor 1268 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0172* | | mg/kg wet | *0.02500* | | *69* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0164* | | mg/kg wet | *0.02500* | | *66* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0156* | | mg/kg wet | *0.02500* | | *62* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0165* | | mg/kg wet | *0.02500* | | *66* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 63 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 63 | 40-140 | | | |
| Aroclor 1260 | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 64 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.3 | 0.02 | mg/kg wet | 0.5000 | | 64 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0160* | | mg/kg wet | *0.02500* | | *64* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0154* | | mg/kg wet | *0.02500* | | *61* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0150* | | mg/kg wet | *0.02500* | | *60* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0148* | | mg/kg wet | *0.02500* | | *59* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 75 | 40-140 | 17 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 74 | 40-140 | 16 | 30 | |
| Aroclor 1260 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 78 | 40-140 | 20 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 75 | 40-140 | 16 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0189* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0180* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0178* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| **Batch DE41411 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE41411 - 3540C** | | | | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 96 | 40-140 | 2 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | 1 | 30 | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | 0.1 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | 0.3 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| R- | Standard Reference Material is biased low (R-). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0125

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0125
Date Received: 5/3/2024
Project Due Date: 5/10/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 544459 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 544460 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 544461 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 544462 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 544463 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 544464 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 544465 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 8 | 544466 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 9 | 544467 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 10 | 544468 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 11 | 544469 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 12 | 544470 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 13 | 544471 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 14 | 544472 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 15 | 544473 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 16 | 544474 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 17 | 544475 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials MA

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24E0125

Date Received: 5/3/2024

| | |
|---|---|
| Are barcode labels on correct containers? | (Yes) / No |
| Are all Flashpoint stickers attached/container ID # circled? | Yes / No / NA |
| Are all Hex Chrome stickers attached? | Yes / No / NA |
| Are all QC stickers attached? | Yes / No / NA |
| Are VOA stickers attached if bubbles noted? | Yes / No / NA |

Completed By: [signature] Date & Time: 5/3/24 1809

Reviewed By: [signature] Date & Time: 5/3/24 1855

5 of 5

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24E0125

| | | | |
|---|---|---|---|
| Turn Time | 5 | Days | |
| Regulatory State | Massachusetts | | |
| Reporting Limits | MA LF | | |

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis: PCB; total Pb -JA 5/23/24

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | total Pb -JA 5/23/24 |
|---|---|---|---|---|---|---|---|
| 1 | 5-2-24 | 1030 | Grab | Soil | ~~B-2~~ C-5 4-5 | X | |
| 2 | " | 1045 | Grab | Soil | C-6 1-2 | X | |
| 3 | " | 1030 | Grab | Soil | C-5 1-2 | X | |
| 4 | " | 1010 | Grab | Soil | C-3 1-2 | X | |
| 5 | " | 0950 | Grab | Soil | C-1 1-2 | X | |
| 6 | " | 1010 | Grab | Soil | ~~C-2~~ C-3 4-5 | X | |
| 7 | " | 1105 | Grab | Soil | D-4 1-2 | X | |
| 8 | " | 1110 | Grab | Soil | D-2 1-2 | X | |
| 9 | " | 1105 | Grab | Soil | ~~D-3~~ D-4 4-5 | X | X -JA 6/10/2024 Rev3 |
| 10 | " | 1310 | Grab | Soil | E-1 1-2 | X | X |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type: | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | |
| Container Volume: | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 | |
| Preservation Code: | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 | |
| | | | | | | | | | | Number of Containers per Sample: | | | |

**Laboratory Use Only**

Cooler Present: yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C IR

Sampled by :

Comments: Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-3-24 1130 | 5/3/24 11:36 | 5/3/24 12:45 | 5/3/24 1721 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
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www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 24E0125

| | | | |
|---|---|---|---|
| Turn Time | 5 | Days | |
| Regulatory State | Massachusetts | | |
| Reporting Limits | MA LF | | |

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis: PCB; HOLD; Total Pb - JA 5/23/24

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | HOLD | Total Pb - JA 5/23/24 |
|---|---|---|---|---|---|---|---|---|
| 11 | 5-2-24 | 1130 | Grab | Soil | ~~F-1 1-2~~ H-1 DUP 1-2 | X | | |
| 12 | " | 1200 | Grab | Soil | F-1 1-2 | X | | |
| — | " | 1130 | Grab | Soil | ~~G-1 1-2~~ H-1 DUP 4-5 | ■ | X | |
| 13 | " | 1145 | Grab | Soil | G-1 1-2 | X | | |
| 14 | " | 1130 | Grab | Soil | H-1 1-2 | X | | |
| 15 | " | 1310 | Grab | Soil | E-1 4-5 | X | | X |
| 16 | " | 1145 | Grab | Soil | G-1 4-5 | X | | X - JA 6/3/2024 Rev2 |
| 17 | " | 1130 | Grab | Soil | H-1 4-5 | X | | X - JA 6/10/2024 Rev3 |
| | | | Grab | Soil | | | | |
| | | | Grab | Soil | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type: | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | | |
| Container Volume: | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 |
| Preservation Code: | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 |
| | | | | | | | | | | Number of Containers per Sample: | | |

**Laboratory Use Only**

Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C IR

Sampled by :

Comments: Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-3-24 1130 | 5/3/24 11:34 | 5/3/24 17:10 | 5/3/24 17:20 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E0126**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

***REVIEWED***
***By ESS Laboratory at 2:17 pm, May 16, 2024***

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

## SAMPLE RECEIPT

The following samples were received on May 03, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E0126-01 | E-2 1-2 | Soil | 8082A |
| 24E0126-02 | E-2 4-5 | Soil | 8082A |
| 24E0126-03 | E-2 DUP 1-2 | Soil | 8082A |
| 24E0126-04 | F-2 1-2 | Soil | 8082A |
| 24E0126-05 | F-2 4-5 | Soil | 8082A |
| 24E0126-06 | G-2 1-2 | Soil | 8082A |
| 24E0126-07 | G-2 4-5 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

## PROJECT NARRATIVE

**No unusual observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E0126-01 through 24E0126-07**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | ( x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes (x) No ( )* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: May 16, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-2 1-2
Date Sampled: 05/03/24 09:15
Percent Solids: 95
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.07** (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *55 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *55 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-2 4-5
Date Sampled: 05/03/24 09:15
Percent Solids: 93
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| **Aroclor 1260 [2C]** | **0.07** (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *72 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-2 DUP 1-2
Date Sampled: 05/03/24 09:15
Percent Solids: 93
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.07** (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *63 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *65 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: F-2 1-2
Date Sampled: 05/03/24 09:35
Percent Solids: 92
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *71 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: F-2 4-5
Date Sampled: 05/03/24 09:35
Percent Solids: 95
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *78 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-2 1-2
Date Sampled: 05/03/24 09:50
Percent Solids: 93
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *68 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-2 4-5
Date Sampled: 05/03/24 09:50
Percent Solids: 89
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| **Aroclor 1254** | **0.3** (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *59 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *59 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE41411 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 96 | 40-140 | 2 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | 1 | 30 | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | 0.1 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | 0.3 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0126
Date Received: 5/3/2024
Project Due Date: 5/10/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered — Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted: Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 544486 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 544487 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 544488 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 544489 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 544490 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 544491 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 544492 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**

Initials: MM

**Were all containers scanned into storage/lab?** (Yes) / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: [signature] Date & Time: 5/3/24 1811
Reviewed By: Date & Time: 5/3/24 18:52

ESS Laboratory
*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 24E0126

| | | | |
|---|---|---|---|
| Turn Time | 5 | Days | |
| Regulatory State | Massachusetts | | |
| Is this project for any of the following?: | ○ CT RCP | ◉ MA MCP | ○ RGP |
| Reporting Limits | | | |
| Electonic Deliverables | ☑ Data Checker | ☑ Other (Please Specify →) | ☑ Excel EDD |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: PCB | HOLD | MS/MSD |
|---|---|---|---|---|---|---|---|---|
| 1 | 5-3-24 | 915 | Grab | Soil | E-2 1-2 | ✓ | | |
| 2 | " | 915 | Grab | Soil | E-2 4-5 | ✓ | | |
| 3 | " | 915 | Grab | Soil | E-2 DUP 1-2 | ✓ | | |
| — | " | 915 | Grab | Soil | E-2 DUP 4-5 | | ✓ | ✓ |
| 4 | " | 935 | Grab | Soil | F-2 1-2 | ✓ | | |
| 5 | " | 935 | Grab | Soil | F-2 4-5 | ✓ | | |
| 6 | " | 950 | Grab | Soil | G-2 1-2 | ✓ | | |
| 7 | " | 950 | Grab | Soil | G-2 4-5 | ✓ | | |
| | | | Grab | Soil | | | | |
| | | | Grab | Soil | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | | |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 |
| | | | | | | | | | | | **Number of Containers per Sample:** | |

**Laboratory Use Only**

Cooler Present: yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C IR

**Sampled by :** DB and KD

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-3-24 1130 | 5/3/24 11:30 | 5/3/24 17:20 | 5/3/24 1720 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E0126**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
***By ESS Laboratory at 1:37 pm, Jun 06, 2024***

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

## SAMPLE RECEIPT

The following samples were received on May 03, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Revision 1 June 6, 2024: This report has been revised to include total lead on sample -02.**

**Question I: All samples for metals were analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E0126-01 | E-2 1-2 | Soil | 8082A |
| 24E0126-02 | E-2 4-5 | Soil | 6010D, 8082A |
| 24E0126-03 | E-2 DUP 1-2 | Soil | 8082A |
| 24E0126-04 | F-2 1-2 | Soil | 8082A |
| 24E0126-05 | F-2 4-5 | Soil | 8082A |
| 24E0126-06 | G-2 1-2 | Soil | 8082A |
| 24E0126-07 | G-2 4-5 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

## PROJECT NARRATIVE

**No unusual observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

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Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E0126-01 through 24E0126-07**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes (x) No ( )* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (x)* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: June 06, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-2 1-2
Date Sampled: 05/03/24 09:15
Percent Solids: 95
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.07** (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *55 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *55 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-2 4-5
Date Sampled: 05/03/24 09:15
Percent Solids: 93

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **1230** (4.07) | --- | 6010D | --- | 1 | KJB | 06/04/24 19:08 | 2.65 100 | DF40408 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-2 4-5
Date Sampled: 05/03/24 09:15
Percent Solids: 93
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| **Aroclor 1260 [2C]** | **0.07** (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *72 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-2 DUP 1-2
Date Sampled: 05/03/24 09:15
Percent Solids: 93
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.07** (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *63 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *65 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: F-2 1-2
Date Sampled: 05/03/24 09:35
Percent Solids: 92
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *71 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: F-2 4-5
Date Sampled: 05/03/24 09:35
Percent Solids: 95
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *78 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-2 1-2
Date Sampled: 05/03/24 09:50
Percent Solids: 93
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *68 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-2 4-5
Date Sampled: 05/03/24 09:50
Percent Solids: 89
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| **Aroclor 1254** | **0.3** (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *59 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *59 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DF40408 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 204 | 16.7 | mg/kg wet | 225.0 | | 91 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 207 | 16.7 | mg/kg wet | 225.0 | | 92 | 80-120 | 2 | 30 | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE41411 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 96 | 40-140 | 2 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | 1 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE41411 - 3540C** | | | | | | | | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | 0.1 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | 0.3 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0126
Date Received: 5/3/2024
Project Due Date: 5/10/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered — Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 544486 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 544487 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 544488 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 544489 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 544490 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 544491 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 544492 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials MM — Yes / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Date & Time: 5/3/24 1811
Reviewed By: Date & Time: 5/3/24 18:52

ESS Laboratory
*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 24E0126

| | | | |
|---|---|---|---|
| Turn Time | 5 | Days | |
| Regulatory State | Massachusetts | | |
| Is this project for any of the following?: | ○ CT RCP | ◉ MA MCP | ○ RGP |
| Reporting Limits | | | |
| Electonic Deliverables | ☑ Data Checker | ☑ Other (Please Specify →) | ☑ Excel EDD |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis: PCB; HOLD; MS/MSD; Total Pb - JA 6/3/24

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | HOLD | MS/MSD | Total Pb - JA 6/3/24 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5-3-24 | 915 | Grab | Soil | E-2 1-2 | ✓ | | | |
| 2 | " | 915 | Grab | Soil | E-2 4-5 | ✓ | | | X |
| 3 | " | 915 | Grab | Soil | E-2 DUP 1-2 | ✓ | | | |
| — | " | 915 | Grab | Soil | E-2 DUP 4-5 | | ✓ | ✓ | |
| 4 | " | 935 | Grab | Soil | F-2 1-2 | ✓ | | | |
| 5 | " | 935 | Grab | Soil | F-2 4-5 | ✓ | | | |
| 6 | " | 950 | Grab | Soil | G-2 1-2 | ✓ | | | |
| 7 | " | 958 | Grab | Soil | G-2 4-5 | ✓ | | | |
| | | | Grab | Soil | | | | | |
| | | | Grab | Soil | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 | |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 | |
| | | | | | | | | | | **Number of Containers per Sample:** | | | |

**Laboratory Use Only**

Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C / Ice

**Sampled by :** DB and KD

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-3-24 1130 | 5/3/24 11:30 | 5/3/24 17:20 | 5/3/24 1720 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E0126**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

***REVIEWED***
***By ESS Laboratory at 1:32 pm, Jun 13, 2024***

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

## SAMPLE RECEIPT

The following samples were received on May 03, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Revision 1 June 6, 2024: This report has been revised to include total lead on sample -02.**

**Revision 2 June 13, 2024: This report has been revised to include total lead on sample -07.**

**Question I: All samples for metals were analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E0126-01 | E-2 1-2 | Soil | 8082A |
| 24E0126-02 | E-2 4-5 | Soil | 6010D, 8082A |
| 24E0126-03 | E-2 DUP 1-2 | Soil | 8082A |
| 24E0126-04 | F-2 1-2 | Soil | 8082A |
| 24E0126-05 | F-2 4-5 | Soil | 8082A |
| 24E0126-06 | G-2 1-2 | Soil | 8082A |
| 24E0126-07 | G-2 4-5 | Soil | 6010D, 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

## PROJECT NARRATIVE

**No unusual observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E0126-01 through 24E0126-07**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes (x) No ( )* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (x)* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: June 06, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-2 1-2
Date Sampled: 05/03/24 09:15
Percent Solids: 95
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.07** (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:09 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *55 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *55 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-2 4-5
Date Sampled: 05/03/24 09:15
Percent Solids: 93

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **1230** (4.07) | --- | 6010D | --- | 1 | KJB | 06/04/24 19:08 | 2.65 100 | DF40408 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-2 4-5
Date Sampled: 05/03/24 09:15
Percent Solids: 93
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| **Aroclor 1260 [2C]** | **0.07** (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:28 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *72 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-2 DUP 1-2
Date Sampled: 05/03/24 09:15
Percent Solids: 93
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.07** (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 1:48 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *63 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *65 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: F-2 1-2
Date Sampled: 05/03/24 09:35
Percent Solids: 92
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:08 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *71 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: F-2 4-5
Date Sampled: 05/03/24 09:35
Percent Solids: 95
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:27 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *78 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-2 1-2
Date Sampled: 05/03/24 09:50
Percent Solids: 93
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/16/24 2:46 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *68 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-2 4-5
Date Sampled: 05/03/24 09:50
Percent Solids: 89

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-07
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **863** (4.02) | --- | 6010D | --- | 1 | KJB | 06/10/24 23:33 | 2.8 100 | DF41009 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-2 4-5
Date Sampled: 05/03/24 09:50
Percent Solids: 89
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0126
ESS Laboratory Sample ID: 24E0126-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/14/24 12:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| **Aroclor 1254** | **0.3** (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/16/24 3:06 | --- | DE41411 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *59 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *59 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DF40408 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 204 | 16.7 | mg/kg wet | 225.0 | | 91 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 207 | 16.7 | mg/kg wet | 225.0 | | 92 | 80-120 | 2 | 30 | |
| **Batch DF41009 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 168 | 16.7 | mg/kg wet | 225.0 | | 74 | 72-128 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 197 | 16.4 | mg/kg wet | 225.0 | | 87 | 72-128 | 16 | 30 | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE41411 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE41411 - 3540C** | | | | | | | | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0200* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 96 | 40-140 | 2 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | 1 | 30 | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 94 | 40-140 | 0.1 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | 0.3 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0126

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0126
Date Received: 5/3/2024
Project Due Date: 5/10/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered — Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 544486 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 544487 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 544488 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 544489 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 544490 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 544491 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 544492 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**

Initials: MM

**Were all containers scanned into storage/lab?** (Yes) / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: [signature] Date & Time: 5/3/24 1811
Reviewed By: Date & Time: 5/3/24 18:52

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0126
Date Received: 5/3/2024
Project Due Date: 5/10/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered — Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 544486 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 544487 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 544488 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 544489 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 544490 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 544491 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 544492 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**

Initials: MS

**Were all containers scanned into storage/lab?** (Yes) / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: [signature] Date & Time: 5/3/24 1811
Reviewed By: [signature] Date & Time: 5/3/24 18:52

ESS Laboratory
*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 24E0126

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Reporting Limits | | |

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis: PCB; HOLD; MS/MSD; Total Pb - JA 6/3/24

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | HOLD | MS/MSD | Total Pb - JA 6/3/24 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5-3-24 | 915 | Grab | Soil | E-2 1-2 | ✓ | | | |
| 2 | " | 915 | Grab | Soil | E-2 4-5 | ✓ | | | X |
| 3 | " | 915 | Grab | Soil | E-2 DUP 1-2 | ✓ | | | |
| — | " | 915 | Grab | Soil | E-2 DUP 4-5 | | ✓ | ✓ | |
| 4 | " | 935 | Grab | Soil | F-2 1-2 | ✓ | | | |
| 5 | " | 935 | Grab | Soil | F-2 4-5 | ✓ | | | |
| 6 | " | 950 | Grab | Soil | G-2 1-2 | ✓ | | | |
| 7 | " | 958 | Grab | Soil | G-2 4-5 | ✓ | | | X - 6/10/2024 - JA REV2 |
| | | | Grab | Soil | | | | | |
| | | | Grab | Soil | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type: | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | |
| Container Volume: | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 | |
| Preservation Code: | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 | |
| | | | | | | | | | | Number of Containers per Sample: | | | |

**Laboratory Use Only**

Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C / Ice

Sampled by : DB and KD

Comments: Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-3-24 1130 | 5/3/24 11:30 | 5/3/24 17:20 | 5/3/24 1720 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

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# CHAIN OF CUSTODY

ESS Lab # 24E0126

| | | | |
|---|---|---|---|
| Turn Time | 5 | Days | |
| Regulatory State | Massachusetts | | |
| Is this project for any of the following?: | ○ CT RCP | ◉ MA MCP | ○ RGP |
| Reporting Limits | | | |
| Electonic Deliverables | ☑ Data Checker | ☑ Other (Please Specify →) | ☑ Excel EDD |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis: PCB; HOLD; MS/MSD; Total Pb - JA 6/3/24

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | HOLD | MS/MSD | Total Pb - JA 6/3/24 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5-3-24 | 915 | Grab | Soil | E-2 1-2 | ✓ | | | |
| 2 | " | 915 | Grab | Soil | E-2 4-5 | ✓ | | | X |
| 3 | " | 915 | Grab | Soil | E-2 DUP 1-2 | ✓ | | | |
| — | " | 915 | Grab | Soil | E-2 DUP 4-5 | | ✓ | ✓ | |
| 4 | " | 935 | Grab | Soil | F-2 1-2 | ✓ | | | |
| 5 | " | 935 | Grab | Soil | F-2 4-5 | ✓ | | | |
| 6 | " | 950 | Grab | Soil | G-2 1-2 | ✓ | | | |
| 7 | " | 958 | Grab | Soil | G-2 4-5 | ✓ | | | |
| | | | Grab | Soil | | | | | |
| | | | Grab | Soil | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 | |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 | |
| | | | | | | | | | | **Number of Containers per Sample:** | | | |

**Laboratory Use Only**

Cooler Present: yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C / Ice

**Sampled by :** DB and KD

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5-3-24 1130 | 5/3/24 11:30 | 5/3/24 17:20 | 5/3/24 1720 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E0814**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 4:37 pm, May 29, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0814

## SAMPLE RECEIPT

The following samples were received on May 20, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Question I: Sample -11 for metals was analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E0814-01 | CC-1 3-4 | Soil | 8082A |
| 24E0814-02 | CC-0 3-4 | Soil | 8082A |
| 24E0814-03 | AA-1 2-3 | Soil | 8082A |
| 24E0814-04 | B0 0-1 | Soil | 8082A |
| 24E0814-05 | B0 2-3 | Soil | 8082A |
| 24E0814-06 | B0 3-4 | Soil | 8082A |
| 24E0814-07 | A-3 2-3 | Soil | 8082A |
| 24E0814-08 | AA-4 2-3 | Soil | 8082A |
| 24E0814-09 | A-5 2-3 | Soil | 8082A |
| 24E0814-10 | B-5 2-3 | Soil | 8082A |
| 24E0814-11 | E-1 0-1 | Soil | 6010D, 8082A |
| 24E0814-12 | F-1 0-1 | Soil | 8082A |
| 24E0814-13 | G-1 0-1 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0814

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**
24E0814-04 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

**Total Metals**
DE42410-SRM1 **Standard Reference Material is biased low (R-).**
Lead (68% @ 81-120%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0814

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0814

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E0814-01 through 24E0814-13**

Matrices: ( ) Ground Water/Surface Water (X) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (X) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (X) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (X) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (X) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (X) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (X) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (X) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (X) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (X)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (X)* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: May 29, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CC-1 3-4
Date Sampled: 04/25/24 14:15
Percent Solids: 86
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:36 | --- | DE42107 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:36 | --- | DE42107 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:36 | --- | DE42107 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:36 | --- | DE42107 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:36 | --- | DE42107 |
| **Aroclor 1254** | **8.2** (0.6) | --- | 8082A | --- | 10 | 05/24/24 15:54 | --- | DE42107 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:36 | --- | DE42107 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:36 | --- | DE42107 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:36 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *127 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *66 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CC-0 3-4
Date Sampled: 04/25/24 14:00
Percent Solids: 87
Initial Volume: 19.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:59 | --- | DE42107 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:59 | --- | DE42107 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:59 | --- | DE42107 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:59 | --- | DE42107 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:59 | --- | DE42107 |
| **Aroclor 1254** | **2.5** (0.3) | --- | 8082A | --- | 5 | 05/24/24 16:18 | --- | DE42107 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:59 | --- | DE42107 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:59 | --- | DE42107 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:59 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *96 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *69 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-1 2-3
Date Sampled: 04/30/24 13:20
Percent Solids: 92
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 18:23 | --- | DE42107 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 18:23 | --- | DE42107 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 18:23 | --- | DE42107 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 18:23 | --- | DE42107 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 18:23 | --- | DE42107 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/23/24 18:23 | --- | DE42107 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 18:23 | --- | DE42107 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 18:23 | --- | DE42107 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 18:23 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *72 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0 0-1
Date Sampled: 05/01/24 15:20
Percent Solids: 90
Initial Volume: 19.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (23.1) | --- | 8082A | --- | 400 | 05/24/24 16:42 | --- | DE42107 |
| Aroclor 1221 | ND (23.1) | --- | 8082A | --- | 400 | 05/24/24 16:42 | --- | DE42107 |
| Aroclor 1232 | ND (23.1) | --- | 8082A | --- | 400 | 05/24/24 16:42 | --- | DE42107 |
| Aroclor 1242 | ND (23.1) | --- | 8082A | --- | 400 | 05/24/24 16:42 | --- | DE42107 |
| Aroclor 1248 | ND (23.1) | --- | 8082A | --- | 400 | 05/24/24 16:42 | --- | DE42107 |
| **Aroclor 1254** | **240** (23.1) | --- | 8082A | --- | 400 | 05/24/24 16:42 | --- | DE42107 |
| Aroclor 1260 | ND (23.1) | --- | 8082A | --- | 400 | 05/24/24 16:42 | --- | DE42107 |
| Aroclor 1262 | ND (23.1) | --- | 8082A | --- | 400 | 05/24/24 16:42 | --- | DE42107 |
| Aroclor 1268 | ND (23.1) | --- | 8082A | --- | 400 | 05/24/24 16:42 | --- | DE42107 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | % | SD | 30-150 |
| *Surrogate: Tetrachloro-m-xylene* | % | SD | 30-150 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0 2-3
Date Sampled: 05/01/24 15:20
Percent Solids: 91
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:10 | --- | DE42107 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:10 | --- | DE42107 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:10 | --- | DE42107 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:10 | --- | DE42107 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:10 | --- | DE42107 |
| **Aroclor 1254 [2C]** | **0.07** (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:10 | --- | DE42107 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:10 | --- | DE42107 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:10 | --- | DE42107 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:10 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0 3-4
Date Sampled: 05/01/24 15:20
Percent Solids: 89
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:33 | --- | DE42107 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:33 | --- | DE42107 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:33 | --- | DE42107 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:33 | --- | DE42107 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:33 | --- | DE42107 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:33 | --- | DE42107 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:33 | --- | DE42107 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:33 | --- | DE42107 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:33 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *85 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3 2-3
Date Sampled: 05/01/24 13:20
Percent Solids: 87
Initial Volume: 19.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 19:57 | --- | DE42107 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 19:57 | --- | DE42107 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 19:57 | --- | DE42107 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 19:57 | --- | DE42107 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 19:57 | --- | DE42107 |
| **Aroclor 1254 [2C]** | **1.1** (0.06) | --- | 8082A | --- | 1 | 05/23/24 19:57 | --- | DE42107 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 19:57 | --- | DE42107 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 19:57 | --- | DE42107 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 19:57 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-4 2-3
Date Sampled: 04/30/24 14:00
Percent Solids: 93
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 20:20 | --- | DE42107 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 20:20 | --- | DE42107 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 20:20 | --- | DE42107 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 20:20 | --- | DE42107 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 20:20 | --- | DE42107 |
| **Aroclor 1254 [2C]** | **0.5** (0.05) | --- | 8082A | --- | 1 | 05/23/24 20:20 | --- | DE42107 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 20:20 | --- | DE42107 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 20:20 | --- | DE42107 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 20:20 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5 2-3
Date Sampled: 05/01/24 13:40
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 20:43 | --- | DE42107 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 20:43 | --- | DE42107 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 20:43 | --- | DE42107 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 20:43 | --- | DE42107 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 20:43 | --- | DE42107 |
| **Aroclor 1254** | **0.09** (0.06) | --- | 8082A | --- | 1 | 05/23/24 20:43 | --- | DE42107 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 20:43 | --- | DE42107 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 20:43 | --- | DE42107 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 20:43 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-5 2-3
Date Sampled: 05/01/24 14:35
Percent Solids: 94
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:07 | --- | DE42107 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:07 | --- | DE42107 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:07 | --- | DE42107 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:07 | --- | DE42107 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:07 | --- | DE42107 |
| Aroclor 1254 [2C] | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:07 | --- | DE42107 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:07 | --- | DE42107 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:07 | --- | DE42107 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:07 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 0-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-11
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **158** (4.06) | --- | 6010D | --- | 1 | KJB | 05/24/24 14:16 | 2.7 100 | DE42410 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 0-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 20.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:30 | --- | DE42107 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:30 | --- | DE42107 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:30 | --- | DE42107 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:30 | --- | DE42107 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:30 | --- | DE42107 |
| **Aroclor 1254 [2C]** | **0.3** (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:30 | --- | DE42107 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:30 | --- | DE42107 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:30 | --- | DE42107 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:30 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: F-1 0-1
Date Sampled: 05/02/24 12:00
Percent Solids: 93
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:54 | --- | DE42107 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:54 | --- | DE42107 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:54 | --- | DE42107 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:54 | --- | DE42107 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:54 | --- | DE42107 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:54 | --- | DE42107 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:54 | --- | DE42107 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:54 | --- | DE42107 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:54 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *88 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1 0-1
Date Sampled: 05/02/24 11:45
Percent Solids: 88
Initial Volume: 20.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 22:18 | --- | DE42107 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 22:18 | --- | DE42107 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 22:18 | --- | DE42107 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 22:18 | --- | DE42107 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 22:18 | --- | DE42107 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/23/24 22:18 | --- | DE42107 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 22:18 | --- | DE42107 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 22:18 | --- | DE42107 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 22:18 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *93 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0814

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DE42410 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 174 | 16.7 | mg/kg wet | 225.0 | | 77 | 72-128 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 163 | 15.4 | mg/kg wet | 225.0 | | 72 | 72-128 | 6 | 30 | |
| **Reference** | | | | | | | | | | |
| Lead | 3050 | 76.9 | mg/kg wet | 4490 | | 68 | 81-120 | | | R- |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE42107 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0225* | | mg/kg wet | *0.02500* | | *90* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0217* | | mg/kg wet | *0.02500* | | *87* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0205* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 85 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0222* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0213* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0814

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE42107 - 3540C** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 0.5 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | 0.3 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | 0.6 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 85 | 40-140 | 0.9 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0223* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0217* | | mg/kg wet | *0.02500* | | *87* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0196* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0814

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| SD | Surrogate recovery(ies) diluted below the MRL (SD). |
| R- | Standard Reference Material is biased low (R-). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0814

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0814
Date Received: 5/20/2024
Project Due Date: 5/28/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 1.7 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered — Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

**All caps/labels say "hold"**

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 551814 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 551815 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 551816 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 551817 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 551818 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 551819 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 551820 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 8 | 551821 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 9 | 551822 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 10 | 551823 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 11 | 551824 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 12 | 551825 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 13 | 551826 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials
Are barcode labels on correct containers? (Yes) / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24E0814
Date Received: 5/20/2024

Completed By: _____ Date & Time: 5/20/24 1726

Reviewed By: _____ Date & Time: 5/20/24 1812

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24E0814

| | | |
|---|---|---|
| **Turn Time** | 5 | Days |
| **Regulatory State** | Massachusetts | |

**Is this project for any of the following?:** ○ CT RCP ◉ MA MCP ○ RGP

**Reporting Limits**

**Electonic Deliverables** ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| **Company Name** | **Project #** | **Project Name** |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| **Contact Person** | **Address** |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| **City** | **State** | **Zip Code** | **PO #** |
|---|---|---|---|
| Raynham | MA | 02767 | |

| **Telephone Number** | **FAX Number** | **Email Address** |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: PCB |
|---|---|---|---|---|---|---|
| 1 | 4/25/24 | 14:15 | Grab | Soil | CC-1 3-4 | X |
| 2 | 4/25/24 | 14:00 | Grab | Soil | CC-0 3-4 | X |
| 3 | 4/30/24 | 13:20 | Grab | Soil | AA-1 2-3 | X |
| 4 | 5/1/24 | 15:20 | Grab | Soil | B0 0-1 | X |
| 5 | 5/1/24 | 15:20 | Grab | Soil | B0 2-3 | X |
| 6 | 5/1/24 | 15:20 | Grab | Soil | B0 3-4 | X |
| 7 | 5/1/24 | 13:20 | Grab | Soil | A-3 2-3 | X |
| 8 | 4/30/24 | 14:00 | Grab | Soil | AA-4 2-3 | X |
| 9 | 5/1/24 | 13:40 | Grab | Soil | A-5 2-3 | X |
| 10 | 5/1/24 | 14:35 | Grab | Soil | B-5 2-3 | X |

| | | |
|---|---|---|
| **Container Type:** | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | AG |
| **Container Volume:** | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | 10 |
| **Preservation Code:** | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | 1 |
| | **Number of Containers per Sample:** | 1 |

**Laboratory Use Only**

Cooler Present: _____ ○ Drop Off
Seals Intact: _____ ○ Pickup
Cooler Temperature: 1.7 ice °C

**Sampled by :** DB and KD

**Comments:** **Please specify "Other" preservative and containers types in this space**

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5/20/24 8:55 | 5/20/24 11:45 | 5/20/24 16:31 | 5/20/24 1631 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24E0814

| | | | |
|---|---|---|---|
| **Turn Time** | 5 | Days | **Reporting Limits** |
| **Regulatory State** | Massachusetts | | |

**Is this project for any of the following?:** ○ CT RCP ◉ MA MCP ○ RGP

**Electonic Deliverables** ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

**Analysis**

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | Total Lead - JA |
|---|---|---|---|---|---|---|---|
| 11 | 5/2/24 | 13:10 | Grab | Soil | E-1 0-1 | X | X |
| 12 | 5/2/24 | 12:00 | Grab | Soil | F-1 0-1 | X | |
| 13 | 5/2/24 | 11:45 | Grab | Soil | G-1 0-1 | X | |
| | | | | | | X | |
| | | | | | | X | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| | | |
|---|---|---|
| **Container Type:** | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | AG |
| **Container Volume:** | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | 10 |
| **Preservation Code:** | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | 1 |
| | **Number of Containers per Sample:** | 1 |

**Laboratory Use Only**

Cooler Present: _____ ○ Drop Off
Seals Intact: _____ ○ Pickup
Cooler Temperature: _____ °C

**Sampled by :** DB and KD

**Comments:** **Please specify "Other" preservative and containers types in this space**

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5/20/24 8:55 | 5/20/24 11:15 | 5/20/24 16:31 | 5/20/24 1631 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E0814**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 2:42 pm, Jun 14, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0814

## SAMPLE RECEIPT

The following samples were received on May 20, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Question I: Samples -06 and -11 for metals was analyzed for a subset of the required MCP list per the client's request.**

**Revision 1 June 14, 2024: This report has been revised to include total lead on sample -06.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E0814-01 | CC-1 3-4 | Soil | 8082A |
| 24E0814-02 | CC-0 3-4 | Soil | 8082A |
| 24E0814-03 | AA-1 2-3 | Soil | 8082A |
| 24E0814-04 | B0 0-1 | Soil | 8082A |
| 24E0814-05 | B0 2-3 | Soil | 8082A |
| 24E0814-06 | B0 3-4 | Soil | 6010D, 8082A |
| 24E0814-07 | A-3 2-3 | Soil | 8082A |
| 24E0814-08 | AA-4 2-3 | Soil | 8082A |
| 24E0814-09 | A-5 2-3 | Soil | 8082A |
| 24E0814-10 | B-5 2-3 | Soil | 8082A |
| 24E0814-11 | E-1 0-1 | Soil | 6010D, 8082A |
| 24E0814-12 | F-1 0-1 | Soil | 8082A |
| 24E0814-13 | G-1 0-1 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0814

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**
24E0814-04 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

**Total Metals**
DE42410-SRM1 **Standard Reference Material is biased low (R-).**
Lead (68% @ 81-120%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0814

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0814

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E0814-01 through 24E0814-13**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | ( x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes ( x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (x)* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: June 14, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CC-1 3-4
Date Sampled: 04/25/24 14:15
Percent Solids: 86
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:36 | --- | DE42107 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:36 | --- | DE42107 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:36 | --- | DE42107 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:36 | --- | DE42107 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:36 | --- | DE42107 |
| **Aroclor 1254** | **8.2** (0.6) | --- | 8082A | --- | 10 | 05/24/24 15:54 | --- | DE42107 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:36 | --- | DE42107 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:36 | --- | DE42107 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:36 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *127 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *66 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CC-0 3-4
Date Sampled: 04/25/24 14:00
Percent Solids: 87
Initial Volume: 19.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:59 | --- | DE42107 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:59 | --- | DE42107 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:59 | --- | DE42107 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:59 | --- | DE42107 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:59 | --- | DE42107 |
| **Aroclor 1254** | **2.5** (0.3) | --- | 8082A | --- | 5 | 05/24/24 16:18 | --- | DE42107 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:59 | --- | DE42107 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:59 | --- | DE42107 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 17:59 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *96 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *69 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-1 2-3
Date Sampled: 04/30/24 13:20
Percent Solids: 92
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 18:23 | --- | DE42107 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 18:23 | --- | DE42107 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 18:23 | --- | DE42107 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 18:23 | --- | DE42107 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 18:23 | --- | DE42107 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/23/24 18:23 | --- | DE42107 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 18:23 | --- | DE42107 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 18:23 | --- | DE42107 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 18:23 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *72 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0 0-1
Date Sampled: 05/01/24 15:20
Percent Solids: 90
Initial Volume: 19.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (23.1) | --- | 8082A | --- | 400 | 05/24/24 16:42 | --- | DE42107 |
| Aroclor 1221 | ND (23.1) | --- | 8082A | --- | 400 | 05/24/24 16:42 | --- | DE42107 |
| Aroclor 1232 | ND (23.1) | --- | 8082A | --- | 400 | 05/24/24 16:42 | --- | DE42107 |
| Aroclor 1242 | ND (23.1) | --- | 8082A | --- | 400 | 05/24/24 16:42 | --- | DE42107 |
| Aroclor 1248 | ND (23.1) | --- | 8082A | --- | 400 | 05/24/24 16:42 | --- | DE42107 |
| **Aroclor 1254** | **240** (23.1) | --- | 8082A | --- | 400 | 05/24/24 16:42 | --- | DE42107 |
| Aroclor 1260 | ND (23.1) | --- | 8082A | --- | 400 | 05/24/24 16:42 | --- | DE42107 |
| Aroclor 1262 | ND (23.1) | --- | 8082A | --- | 400 | 05/24/24 16:42 | --- | DE42107 |
| Aroclor 1268 | ND (23.1) | --- | 8082A | --- | 400 | 05/24/24 16:42 | --- | DE42107 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | % | SD | 30-150 |
| *Surrogate: Tetrachloro-m-xylene* | % | SD | 30-150 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0 2-3
Date Sampled: 05/01/24 15:20
Percent Solids: 91
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:10 | --- | DE42107 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:10 | --- | DE42107 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:10 | --- | DE42107 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:10 | --- | DE42107 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:10 | --- | DE42107 |
| **Aroclor 1254 [2C]** | **0.07** (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:10 | --- | DE42107 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:10 | --- | DE42107 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:10 | --- | DE42107 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:10 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0 3-4
Date Sampled: 05/01/24 15:20
Percent Solids: 89

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-06
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **64.5** (3.86) | --- | 6010D | --- | 1 | KJB | 06/10/24 23:42 | 2.9 100 | DF41009 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0 3-4
Date Sampled: 05/01/24 15:20
Percent Solids: 89
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:33 | --- | DE42107 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:33 | --- | DE42107 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:33 | --- | DE42107 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:33 | --- | DE42107 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:33 | --- | DE42107 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:33 | --- | DE42107 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:33 | --- | DE42107 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:33 | --- | DE42107 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 19:33 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *85 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-3 2-3
Date Sampled: 05/01/24 13:20
Percent Solids: 87
Initial Volume: 19.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 19:57 | --- | DE42107 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 19:57 | --- | DE42107 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 19:57 | --- | DE42107 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 19:57 | --- | DE42107 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 19:57 | --- | DE42107 |
| **Aroclor 1254 [2C]** | **1.1** (0.06) | --- | 8082A | --- | 1 | 05/23/24 19:57 | --- | DE42107 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 19:57 | --- | DE42107 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 19:57 | --- | DE42107 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 19:57 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-4 2-3
Date Sampled: 04/30/24 14:00
Percent Solids: 93
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 20:20 | --- | DE42107 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 20:20 | --- | DE42107 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 20:20 | --- | DE42107 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 20:20 | --- | DE42107 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 20:20 | --- | DE42107 |
| **Aroclor 1254 [2C]** | **0.5** (0.05) | --- | 8082A | --- | 1 | 05/23/24 20:20 | --- | DE42107 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 20:20 | --- | DE42107 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 20:20 | --- | DE42107 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 20:20 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-5 2-3
Date Sampled: 05/01/24 13:40
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 20:43 | --- | DE42107 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 20:43 | --- | DE42107 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 20:43 | --- | DE42107 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 20:43 | --- | DE42107 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 20:43 | --- | DE42107 |
| **Aroclor 1254** | **0.09** (0.06) | --- | 8082A | --- | 1 | 05/23/24 20:43 | --- | DE42107 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 20:43 | --- | DE42107 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 20:43 | --- | DE42107 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 05/23/24 20:43 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-5 2-3
Date Sampled: 05/01/24 14:35
Percent Solids: 94
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:07 | --- | DE42107 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:07 | --- | DE42107 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:07 | --- | DE42107 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:07 | --- | DE42107 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:07 | --- | DE42107 |
| Aroclor 1254 [2C] | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:07 | --- | DE42107 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:07 | --- | DE42107 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:07 | --- | DE42107 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:07 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 0-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-11
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **158** (4.06) | --- | 6010D | --- | 1 | KJB | 05/24/24 14:16 | 2.7 100 | DE42410 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 0-1
Date Sampled: 05/02/24 13:10
Percent Solids: 91
Initial Volume: 20.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:30 | --- | DE42107 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:30 | --- | DE42107 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:30 | --- | DE42107 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:30 | --- | DE42107 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:30 | --- | DE42107 |
| **Aroclor 1254 [2C]** | **0.3** (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:30 | --- | DE42107 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:30 | --- | DE42107 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:30 | --- | DE42107 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:30 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: F-1 0-1
Date Sampled: 05/02/24 12:00
Percent Solids: 93
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:54 | --- | DE42107 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:54 | --- | DE42107 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:54 | --- | DE42107 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:54 | --- | DE42107 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:54 | --- | DE42107 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:54 | --- | DE42107 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:54 | --- | DE42107 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:54 | --- | DE42107 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 21:54 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *88 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1 0-1
Date Sampled: 05/02/24 11:45
Percent Solids: 88
Initial Volume: 20.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24E0814
ESS Laboratory Sample ID: 24E0814-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 5/21/24 13:30

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 22:18 | --- | DE42107 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 22:18 | --- | DE42107 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 22:18 | --- | DE42107 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 22:18 | --- | DE42107 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 22:18 | --- | DE42107 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 05/23/24 22:18 | --- | DE42107 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 22:18 | --- | DE42107 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 22:18 | --- | DE42107 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 05/23/24 22:18 | --- | DE42107 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *93 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0814

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DE42410 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 174 | 16.7 | mg/kg wet | 225.0 | | 77 | 72-128 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 163 | 15.4 | mg/kg wet | 225.0 | | 72 | 72-128 | 6 | 30 | |
| **Reference** | | | | | | | | | | |
| Lead | 3050 | 76.9 | mg/kg wet | 4490 | | 68 | 81-120 | | | R- |
| **Batch DF41009 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 168 | 16.7 | mg/kg wet | 225.0 | | 74 | 72-128 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 197 | 16.4 | mg/kg wet | 225.0 | | 87 | 72-128 | 16 | 30 | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DE42107 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0225* | | mg/kg wet | *0.02500* | | *90* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0217* | | mg/kg wet | *0.02500* | | *87* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0205* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0814

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DE42107 - 3540C** | | | | | | | | | | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 84 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 89 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 85 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0222* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0213* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 84 | 40-140 | 0.5 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 83 | 40-140 | 0.3 | 30 | |
| Aroclor 1260 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 90 | 40-140 | 0.6 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 85 | 40-140 | 0.9 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0223* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0217* | | mg/kg wet | *0.02500* | | *87* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0196* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0814

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| SD | Surrogate recovery(ies) diluted below the MRL (SD). |
| R- | Standard Reference Material is biased low (R-). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E0814

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E0814
Date Received: 5/20/2024
Project Due Date: 5/28/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 1.7 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered — Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

**All caps/labels say "hold"**

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 551814 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 551815 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 551816 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 551817 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 551818 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 551819 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 551820 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 8 | 551821 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 9 | 551822 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 10 | 551823 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 11 | 551824 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 12 | 551825 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 13 | 551826 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials
Are barcode labels on correct containers? (Yes) / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24E0814
Date Received: 5/20/2024

Completed By: _____ Date & Time: 5/20/24 1726

Reviewed By: _____ Date & Time: 5/20/24 1812

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24E0814

| | | |
|---|---|---|
| **Turn Time** | 5 | Days |
| **Regulatory State** | Massachusetts | |
| **Is this project for any of the following?:** | ○ CT RCP ◉ MA MCP ○ RGP | |

**Reporting Limits**

**Electonic Deliverables** ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| **Company Name** | **Project #** | **Project Name** |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

**Analysis**

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | Total Pb - JA 6/10/24 |
|---|---|---|---|---|---|---|---|
| 1 | 4/25/24 | 14:15 | Grab | Soil | CC-1 3-4 | X | |
| 2 | 4/25/24 | 14:00 | Grab | Soil | CC-0 3-4 | X | |
| 3 | 4/30/24 | 13:20 | Grab | Soil | AA-1 2-3 | X | |
| 4 | 5/1/24 | 15:20 | Grab | Soil | B0 0-1 | X | |
| 5 | 5/1/24 | 15:20 | Grab | Soil | B0 2-3 | X | |
| 6 | 5/1/24 | 15:20 | Grab | Soil | B0 3-4 | X | X |
| 7 | 5/1/24 | 13:20 | Grab | Soil | A-3 2-3 | X | |
| 8 | 4/30/24 | 14:00 | Grab | Soil | AA-4 2-3 | X | |
| 9 | 5/1/24 | 13:40 | Grab | Soil | A-5 2-3 | X | |
| 10 | 5/1/24 | 14:35 | Grab | Soil | B-5 2-3 | X | |

| | | |
|---|---|---|
| **Container Type:** | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | AG |
| **Container Volume:** | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | 10 |
| **Preservation Code:** | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | 1 |
| | **Number of Containers per Sample:** | 1 |

**Laboratory Use Only**

Cooler Present: _____ ○ Drop Off
Seals Intact: _____ ○ Pickup
Cooler Temperature: 1.7 ice °C

**Sampled by :** DB and KD

**Comments:** **Please specify "Other" preservative and containers types in this space**

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5/20/24 8:55 | 5/20/24 11:45 | 5/20/24 16:31 | 5/20/24 1631 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24E0814

Turn Time: 5 Days
Regulatory State: Massachusetts
Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP
Reporting Limits
Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis: PCB; Total Lead - JA

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | PCB | Total Lead - JA |
|---|---|---|---|---|---|---|---|
| 11 | 5/2/24 | 13:10 | Grab | Soil | E-1 0-1 | X | X |
| 12 | 5/2/24 | 12:00 | Grab | Soil | F-1 0-1 | X | |
| 13 | 5/2/24 | 11:45 | Grab | Soil | G-1 0-1 | X | |
| | | | | | | X | |
| | | | | | | X | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**Container Type:** AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — AG
**Container Volume:** 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10
**Preservation Code:** 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1
**Number of Containers per Sample:** 1

**Laboratory Use Only**
Cooler Present: _____ ○ Drop Off
Seals Intact: _____ ○ Pickup
Cooler Temperature: °C

Sampled by : DB and KD

Comments: Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 5/20/24 8:55 | 5/20/24 11:15 | 5/20/24 16:31 | 5/20/24 1631 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24E1060**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
***By ESS Laboratory at 7:07 pm, Jun 03, 2024***

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E1060

## SAMPLE RECEIPT

The following samples were received on May 24, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Question I: All samples for metals were analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24E1060-01 | E-1 2-3 | Soil | 6010D |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E1060

## PROJECT NARRATIVE

**No unusual observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E1060

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E1060

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24E1060-01**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | ( ) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes (x) No ( )* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (x)* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: June 03, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 2-3
Date Sampled: 05/02/24 13:10
Percent Solids: 92

ESS Laboratory Work Order: 24E1060
ESS Laboratory Sample ID: 24E1060-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **183** (3.73) | --- | 6010D | --- | 1 | KJB | 05/28/24 21:31 | 2.9 100 | DE42806 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E1060

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DE42806 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 193 | 15.4 | mg/kg wet | 225.0 | | 86 | 72-128 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 177 | 14.5 | mg/kg wet | 225.0 | | 79 | 72-128 | 8 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E1060

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24E1060

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24E1060
Date Received: 5/24/2024
Project Due Date: 6/3/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 3.8 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / (NA)
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / (No)
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 553680 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review** Initials RSB

**Were all containers scanned into storage/lab?** (Yes) / No
Are barcode labels on correct containers? Yes / No / (NA)
Are all Flashpoint stickers attached/container ID # circled? Yes / No / (NA)
Are all Hex Chrome stickers attached? Yes / No / (NA)
Are all QC stickers attached? Yes / No / (NA)
Are VOA stickers attached if bubbles noted? Yes / No / (NA)

Completed By: Date & Time: 5/24/24 17:34
Reviewed By: Date & Time: 5/24/24 1819

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

**ESS Lab #** 24E1060

**Turn Time** 5 Days
**Regulatory State** Massachusetts
**Is this project for any of the following?:** ○ CT RCP ◉ MA MCP ○ RGP

**Reporting Limits**

**Electonic Deliverables** ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

**Analysis**

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | lead |
|---|---|---|---|---|---|---|
| 1 | 5/2/24 | 13:10 | Grab | Soil | E-1 2-3 | X |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

**Container Type:** AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — AG
**Container Volume:** 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10
**Preservation Code:** 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1
**Number of Containers per Sample:** 1

**Laboratory Use Only**
Cooler Present: ✓ ○ Drop Off
Seals Intact: ✓ ○ Pickup
Cooler Temperature: 3.8 Ice °C

**Sampled by :** DB and KD

**Comments:** **Please specify "Other" preservative and containers types in this space**

The lab already has samples E-1 1-2, E-1 3-4, and E-1 4-5 in their possession, for previous analyses of PCBs. 1 additional sample E-1 2

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| fridge 5/2/24 17:14 | 5/2/24 17:09 | 5/24/24 17:23 | 5/24/24 17:23 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24F0155**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

***REVIEWED***
***By ESS Laboratory at 7:00 pm, Jun 12, 2024***

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0155

## SAMPLE RECEIPT

The following samples were received on June 05, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Question I: All samples for Metals were analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24F0155-01 | C-1 3-4 | Soil | 6010D |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0155

## PROJECT NARRATIVE

**No unusual observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0155

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0155

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24F0155-01**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | ( ) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes (x) No ( )* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (x)* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: June 12, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C-1 3-4
Date Sampled: 05/02/24 09:50
Percent Solids: 90

ESS Laboratory Work Order: 24F0155
ESS Laboratory Sample ID: 24F0155-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **54.6** (3.71) | --- | 6010D | --- | 1 | KJB | 06/07/24 18:13 | 2.99 100 | DF40619 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0155

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DF40619 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 199 | 15.4 | mg/kg wet | 225.0 | | 88 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 234 | 16.7 | mg/kg wet | 225.0 | | 104 | 80-120 | 16 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0155

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0155

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24F0155
Date Received: 6/5/2024
Project Due Date: 6/12/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.7 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / (No)
    b. Does methanol cover soil completely? Yes / No / (NA)
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered — Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / (No)
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 556882 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials BB — (Yes) / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Date & Time: 6/5/24 16:47
Reviewed By: Date & Time: 6/5/24 1832

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24 F0155

| | | |
|---|---|---|
| **Turn Time** | 5 | Days |
| **Regulatory State** | Massachusetts | |

**Is this project for any of the following?:** ○ CT RCP ◉ MA MCP ○ RGP

**Reporting Limits**

**Electonic Deliverables** ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: lead |
|---|---|---|---|---|---|---|
| 1 | 5/2/24 | 09:50 | Grab | Soil | C-1 3-4 | X |

**Container Type:** AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — AG

**Container Volume:** 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10

**Preservation Code:** 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1

**Number of Containers per Sample:** 1

**Laboratory Use Only**

Cooler Present: YC5 ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.7 °C / Q

**Sampled by :** DB and KD

**Comments:** **Please specify "Other" preservative and containers types in this space**

The lab already has samples E-1 1-2, E-1 3-4, and E-1 4-5 in their possession, for previous analyses of PCBs. 1 additional sample E-1 2

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 6/3/24 3:30PM | 6/5/24 14:35 | 6/5/24 16:36 | 6/5/24 16:36 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24F0473**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 7:41 pm, Jun 18, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0473

## SAMPLE RECEIPT

The following samples were received on June 12, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Question I: All samples for Metals were analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24F0473-01 | B-2 2-3 | Soil | 6010D |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0473

## PROJECT NARRATIVE

**No unusual observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0473

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0473

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24F0473-01**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | ( ) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? ***Data User Note:*** ***Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*** | Yes (x) No ( )* |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes (x) No ( )* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (x)* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: June 18, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-2 2-3
Date Sampled: 05/01/24 15:30
Percent Solids: 91

ESS Laboratory Work Order: 24F0473
ESS Laboratory Sample ID: 24F0473-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **57.3** (3.91) | --- | 6010D | --- | 1 | KJB | 06/13/24 19:50 | 2.8 100 | DF41307 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0473

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DF41307 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 5.00 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 236 | 15.6 | mg/kg wet | 275.0 | | 86 | 74-108 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 253 | 16.7 | mg/kg wet | 275.0 | | 92 | 74-108 | 7 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0473

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0473

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24F0473
Date Received: 6/12/2024
Project Due Date: 6/19/2024
Days for Project: 5 Day

Air bill manifest present? No
Air No.: NA

Were custody seals present? No

Is radiation count <100 CPM? Yes

Is a Cooler Present? Yes
Temp: 4.7 Iced with: Ice

Was COC signed and dated by client? Yes

6. Does COC match bottles? Yes

7. Is COC complete and correct? Yes

8. Were samples received intact? Yes

**9. Were labs informed about short holds & rushes?** Yes / No (NA)

10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
ESS Sample IDs:
Analysis:
TAT:

12. Were VOAs received? Yes / (No)
a. Air bubbles in aqueous VOAs? Yes / No
b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? (Yes) / No
a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
a. Was there a need to contact the client? Yes / No
Who was contacted: Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 560304 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials: Yes / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Date & Time: 6/12/24 1705
Reviewed By: Date & Time: 6/12/24 1757

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24F0473

| | | | |
|---|---|---|---|
| **Turn Time** | 5 | Days | **Reporting Limits** |
| **Regulatory State** | Massachusetts | | |
| **Is this project for any of the following?:** | ○ CT RCP ◉ MA MCP ○ RGP | | **Electonic Deliverables** ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD |

| **Company Name** | **Project #** | **Project Name** |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

**Analysis**

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | lead |
|---|---|---|---|---|---|---|
| 1 | 5/1/24 | 15:30 | Grab | Soil | B-2 2-3 | X |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

**Container Type:** AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — AG

**Container Volume:** 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10

**Preservation Code:** 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1

**Number of Containers per Sample:** 1

**Laboratory Use Only**

Cooler Present: 4C ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.7 °C / G

**Sampled by :** DB and KD

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 6/11/24 16:30 | 6/12/24 13:30 | 6/12/24 16:43 | 6/12/24 1643 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24F0927**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 8:53 pm, Jul 01, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

## SAMPLE RECEIPT

The following samples were received on June 24, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Low Level VOA vials were frozen by ESS Laboratory on 6/24/24 at 18:15.**
**Tetrahydrofuran is reported above the MA CAM reporting limit of 0.010 mg/kg.**

**Question I: All samples for EPH & Metals were analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24F0927-01 | E-0 9-10 | Soil | 6010D |
| 24F0927-02 | I-3 4-8 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260D Low, 8270E, 9045, 9050A, 9095A |
| 24F0927-03 | JJ-0.5 4-5 | Soil | 8082A |
| 24F0927-04 | II-0.5 4-5 | Soil | 8082A |
| 24F0927-05 | HH-0.5 4-5 | Soil | 8082A |
| 24F0927-06 | GG-2 4-5 | Soil | 8082A |
| 24F0927-07 | GG-1 4-5 | Soil | 8082A |
| 24F0927-08 | FF-1 4-5 | Soil | 8082A |
| 24F0927-09 | FF-2 4-5 | Soil | 8082A |
| 24F0927-10 | BB-1 4-5 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

## PROJECT NARRATIVE

**Semi-Volatile Organic Compounds**

D4F0471-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (140% @ 40-160%)

D4F0501-CCV1 **Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration**
2,4-Dinitrophenol (73% @ 40-160%)

D4F0501-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (73% @ 40-160%), Pentachlorophenol (88% @ 40-160%)

D4F0501-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
Di-n-octylphthalate (23% @ 20%)

**Volatile Organics Low Level**

D4F0495-CCV1 **Calibration required quadratic regression (Q).**
1,4-Dioxane (90% @ 80-120%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24F0927-01 through 24F0927-10**

Matrices: ( ) Ground Water/Surface Water (X) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| (X) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (X) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| (X) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | (X) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (X) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | (X) MassDEP EPH CAM IV B | (X) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (X) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (X) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (X) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (X) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes (X) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (X) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? ***Data User Note:*** ***Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*** | Yes ( ) No (X)* |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (X)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (X)* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: June 28, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-0 9-10
Date Sampled: 06/21/24 11:25
Percent Solids: 84

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **235** (5.80) | --- | 6010D | --- | 1 | KJB | 06/25/24 21:31 | 2.04 100 | DF42508 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3 4-8
Date Sampled: 06/21/24 12:05
Percent Solids: 88

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND (0.99) | --- | 6010D | --- | 1 | KJB | 06/25/24 21:33 | 2.29 100 | DF42508 |
| **Barium** | **13.0** (0.99) | --- | 6010D | --- | 1 | KJB | 06/25/24 21:33 | 2.29 100 | DF42508 |
| Cadmium | ND (0.49) | --- | 6010D | --- | 1 | KJB | 06/25/24 21:33 | 2.29 100 | DF42508 |
| **Chromium** | **5.09** (0.99) | --- | 6010D | --- | 1 | KJB | 06/25/24 21:33 | 2.29 100 | DF42508 |
| **Lead** | **35.2** (4.95) | --- | 6010D | --- | 1 | KJB | 06/25/24 21:33 | 2.29 100 | DF42508 |
| Mercury | ND (0.033) | --- | 7471B | --- | 1 | AFV | 06/25/24 19:00 | 0.68 40 | DF42509 |
| Selenium | ND (4.95) | --- | 6010D | --- | 1 | KJB | 06/25/24 21:33 | 2.29 100 | DF42508 |
| Silver | ND (0.49) | --- | 6010D | --- | 1 | KJB | 06/25/24 21:33 | 2.29 100 | DF42508 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3 4-8
Date Sampled: 06/21/24 12:05
Percent Solids: 88
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD
Prepared: 6/25/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,1,1-Trichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,1,2,2-Tetrachloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,1,2-Trichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,1-Dichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,1-Dichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,1-Dichloropropene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,2,3-Trichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,2,3-Trichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,2,4-Trichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,2,4-Trimethylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,2-Dibromoethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,2-Dichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,2-Dichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,2-Dichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,3,5-Trimethylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,3-Dichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,3-Dichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,4-Dichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 1,4-Dioxane | ND (0.0976) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 2,2-Dichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 2-Butanone | ND (0.0488) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 2-Chlorotoluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 2-Hexanone | ND (0.0488) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 4-Chlorotoluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| 4-Isopropyltoluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3 4-8
Date Sampled: 06/21/24 12:05
Percent Solids: 88
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD
Prepared: 6/25/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0488) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Acetone | ND (0.0488) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Benzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Bromobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Bromochloromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Bromodichloromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Bromoform | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Bromomethane | ND (0.0098) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Carbon Disulfide | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Carbon Tetrachloride | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Chlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Chloroethane | ND (0.0098) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Chloroform | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Chloromethane | ND (0.0098) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| cis-1,2-Dichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| cis-1,3-Dichloropropene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Dibromochloromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Dibromomethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Dichlorodifluoromethane | ND (0.0098) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Diethyl Ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Di-isopropyl ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Ethyl tertiary-butyl ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Ethylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Hexachlorobutadiene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Isopropylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Methyl tert-Butyl Ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Methylene Chloride | ND (0.0244) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3 4-8
Date Sampled: 06/21/24 12:05
Percent Solids: 88
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD
Prepared: 6/25/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| n-Butylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| n-Propylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| sec-Butylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Styrene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| tert-Butylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Tertiary-amyl methyl ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Tetrachloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Tetrahydrofuran | ND (0.0195) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Toluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| trans-1,2-Dichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| trans-1,3-Dichloropropene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Trichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Trichlorofluoromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Vinyl Chloride | ND (0.0098) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Xylene O | ND (0.0049) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Xylene P,M | ND (0.0098) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |
| Xylenes (Total) | ND (0.0098) | --- | 8260D Low | --- | 1 | MD | 06/25/24 14:53 | D4F0495 | DF42521 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *101 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *95 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *102 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *92 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3 4-8
Date Sampled: 06/21/24 12:05
Percent Solids: 88
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 6/24/24 18:26

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 1,2,4-Trichlorobenzene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 1,2-Dichlorobenzene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 1,3-Dichlorobenzene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 1,4-Dichlorobenzene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 2,4,5-Trichlorophenol | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 2,4,6-Trichlorophenol | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 2,4-Dichlorophenol | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 2,4-Dimethylphenol | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 2,4-Dinitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 2,4-Dinitrotoluene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 2,6-Dinitrotoluene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 2-Chloronaphthalene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 2-Chlorophenol | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 2-Methylnaphthalene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 2-Methylphenol | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 2-Nitrophenol | ND (0.553) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 3,3´-Dichlorobenzidine | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 3+4-Methylphenol | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 4-Bromophenyl-phenylether | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 4-Chloroaniline | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| 4-Nitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Acenaphthene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Acenaphthylene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Acetophenone | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Aniline | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Anthracene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3 4-8
Date Sampled: 06/21/24 12:05
Percent Solids: 88
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 6/24/24 18:26

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Benzo(a)anthracene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Benzo(a)pyrene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Benzo(b)fluoranthene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Benzo(g,h,i)perylene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Benzo(k)fluoranthene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| bis(2-Chloroethoxy)methane | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| bis(2-Chloroethyl)ether | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| bis(2-chloroisopropyl)Ether | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| bis(2-Ethylhexyl)phthalate | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Butylbenzylphthalate | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Chrysene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Dibenzo(a,h)Anthracene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Dibenzofuran | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Diethylphthalate | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Dimethylphthalate | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Di-n-butylphthalate | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Di-n-octylphthalate | ND (0.553) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| **Fluoranthene** | **0.326** (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Fluorene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Hexachlorobenzene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Hexachlorobutadiene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Hexachloroethane | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Indeno(1,2,3-cd)Pyrene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Isophorone | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Naphthalene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Nitrobenzene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3 4-8
Date Sampled: 06/21/24 12:05
Percent Solids: 88
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 6/24/24 18:26

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Pentachlorophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Phenanthrene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Phenol | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| **Pyrene** | **0.411** (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |
| Pyridine | ND (0.276) | --- | 8270E | --- | 1 | TJ | 06/26/24 2:23 | D4F0501 | DF42405 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *93 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *84 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *98 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *97 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *87 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *93 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *92 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *120 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3 4-8
Date Sampled: 06/21/24 12:05
Percent Solids: 88
Initial Volume: 19.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 11:27 | --- | DF42407 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 11:27 | --- | DF42407 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 11:27 | --- | DF42407 |
| Aroclor 1242 [2C] | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 11:27 | --- | DF42407 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 11:27 | --- | DF42407 |
| **Aroclor 1254 [2C]** | **0.3** (0.06) | --- | 8082A | --- | 1 | 06/26/24 11:27 | --- | DF42407 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 11:27 | --- | DF42407 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 11:27 | --- | DF42407 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 11:27 | --- | DF42407 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3 4-8
Date Sampled: 06/21/24 12:05
Percent Solids: 88
Initial Volume: 20.4g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/24/24 18:27

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0028) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| 4,4´-DDE | ND (0.0028) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| 4,4´-DDT | ND (0.0028) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| Aldrin | ND (0.0028) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| alpha-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| alpha-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| beta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| Chlordane (Total) | ND (0.0222) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| delta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| Dieldrin | ND (0.0028) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| Endosulfan I [2C] | ND (0.0028) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| Endosulfan II | ND (0.0028) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| Endosulfan Sulfate | ND (0.0028) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| Endrin | ND (0.0028) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| Endrin Ketone | ND (0.0028) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| **gamma-Chlordane [2C]** | **0.0043** (0.0028) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| Heptachlor | ND (0.0028) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| Heptachlor Epoxide | ND (0.0028) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| Hexachlorobenzene | ND (0.0028) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| Methoxychlor | ND (0.0028) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |
| Toxaphene | ND (0.139) | --- | 8081B | --- | 1 | 06/25/24 12:15 | D4F0489 | DF42404 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *86 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3 4-8
Date Sampled: 06/21/24 12:05
Percent Solids: 88
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 15:21

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.011) | --- | 8151A | --- | 1 | 06/26/24 15:43 | D4F0511 | DF42528 |
| 2,4,5-TP (Silvex) | ND (0.011) | --- | 8151A | --- | 1 | 06/26/24 15:43 | D4F0511 | DF42528 |
| 2,4-D | ND (0.053) | --- | 8151A | --- | 1 | 06/26/24 15:43 | D4F0511 | DF42528 |
| 2,4-DB | ND (0.053) | --- | 8151A | --- | 1 | 06/26/24 15:43 | D4F0511 | DF42528 |
| Dalapon | ND (0.051) | --- | 8151A | --- | 1 | 06/26/24 15:43 | D4F0511 | DF42528 |
| Dicamba | ND (0.011) | --- | 8151A | --- | 1 | 06/26/24 15:43 | D4F0511 | DF42528 |
| Dichlorprop | ND (0.053) | --- | 8151A | --- | 1 | 06/26/24 15:43 | D4F0511 | DF42528 |
| Dinoseb | ND (0.053) | --- | 8151A | --- | 1 | 06/26/24 15:43 | D4F0511 | DF42528 |
| MCPA | ND (2.61) | --- | 8151A | --- | 1 | 06/26/24 15:43 | D4F0511 | DF42528 |
| MCPP | ND (2.64) | --- | 8151A | --- | 1 | 06/26/24 15:43 | D4F0511 | DF42528 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *98 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3 4-8
Date Sampled: 06/21/24 12:05
Percent Solids: 88
Initial Volume: 20.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 6/25/24 9:45

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **73.2** (10.9) | --- | 8100M | --- | 1 | 06/25/24 16:07 | --- | DF42504 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *74 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-3 4-8
Date Sampled: 06/21/24 12:05
Percent Solids: 88

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-02
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 71** (5) | --- | 9050A | --- | 1 | JLK | 06/24/24 21:50 | umhos/cm | DF42446 |
| **Corrosivity (pH)** | **7.35** (N/A) | --- | 9045 | --- | 1 | JLK | 06/24/24 19:55 | S.U. | DF42450 |
| **Corrosivity (pH) Sample Temp** | **20.5** | --- | 2550B | --- | 1 | JLK | 06/24/24 19:55 | °C | DF42450 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | EAM | 06/25/24 17:09 | °F | DF42534 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | CCP | 06/26/24 15:44 | ml/5 min | DF42626 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 06/24/24 18:56 | mg/kg | DF42434 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 06/24/24 18:56 | mg/kg | DF42434 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ-0.5 4-5
Date Sampled: 06/20/24 10:00
Percent Solids: 88
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 11:47 | --- | DF42407 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 11:47 | --- | DF42407 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 11:47 | --- | DF42407 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 11:47 | --- | DF42407 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 11:47 | --- | DF42407 |
| **Aroclor 1254 [2C]** | **0.6** (0.06) | --- | 8082A | --- | 1 | 06/26/24 11:47 | --- | DF42407 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 11:47 | --- | DF42407 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 11:47 | --- | DF42407 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 11:47 | --- | DF42407 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *72 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-0.5 4-5
Date Sampled: 06/20/24 10:15
Percent Solids: 79
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 12:07 | --- | DF42407 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 12:07 | --- | DF42407 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 12:07 | --- | DF42407 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 12:07 | --- | DF42407 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 12:07 | --- | DF42407 |
| **Aroclor 1254 [2C]** | **0.09** (0.06) | --- | 8082A | --- | 1 | 06/26/24 12:07 | --- | DF42407 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 12:07 | --- | DF42407 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 12:07 | --- | DF42407 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 12:07 | --- | DF42407 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *68 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-0.5 4-5
Date Sampled: 06/20/24 10:30
Percent Solids: 88
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 16:10 | --- | DF42506 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 16:10 | --- | DF42506 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 16:10 | --- | DF42506 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 16:10 | --- | DF42506 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 16:10 | --- | DF42506 |
| Aroclor 1254 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 16:10 | --- | DF42506 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 16:10 | --- | DF42506 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 16:10 | --- | DF42506 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 16:10 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *96 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: GG-2 4-5
Date Sampled: 06/20/24 10:50
Percent Solids: 88
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 16:41 | --- | DF42506 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 16:41 | --- | DF42506 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 16:41 | --- | DF42506 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 16:41 | --- | DF42506 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 16:41 | --- | DF42506 |
| Aroclor 1254 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 16:41 | --- | DF42506 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 16:41 | --- | DF42506 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 16:41 | --- | DF42506 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 16:41 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *91 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: GG-1 4-5
Date Sampled: 06/20/24 11:05
Percent Solids: 90
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:01 | --- | DF42506 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:01 | --- | DF42506 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:01 | --- | DF42506 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:01 | --- | DF42506 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:01 | --- | DF42506 |
| Aroclor 1254 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:01 | --- | DF42506 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:01 | --- | DF42506 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:01 | --- | DF42506 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:01 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *86 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-1 4-5
Date Sampled: 06/20/24 11:20
Percent Solids: 86
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:21 | --- | DF42506 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:21 | --- | DF42506 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:21 | --- | DF42506 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:21 | --- | DF42506 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:21 | --- | DF42506 |
| Aroclor 1254 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:21 | --- | DF42506 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:21 | --- | DF42506 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:21 | --- | DF42506 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:21 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *92 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-2 4-5
Date Sampled: 06/20/24 11:35
Percent Solids: 86
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:40 | --- | DF42506 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:40 | --- | DF42506 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:40 | --- | DF42506 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:40 | --- | DF42506 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:40 | --- | DF42506 |
| Aroclor 1254 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:40 | --- | DF42506 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:40 | --- | DF42506 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:40 | --- | DF42506 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 17:40 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *94 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-1 4-5
Date Sampled: 06/20/24 14:40
Percent Solids: 93
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0927
ESS Laboratory Sample ID: 24F0927-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 18:00 | --- | DF42506 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 18:00 | --- | DF42506 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 18:00 | --- | DF42506 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 18:00 | --- | DF42506 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 18:00 | --- | DF42506 |
| **Aroclor 1254 [2C]** | **0.5** (0.05) | --- | 8082A | --- | 1 | 06/26/24 18:00 | --- | DF42506 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 18:00 | --- | DF42506 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 18:00 | --- | DF42506 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 18:00 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *88 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DF42508 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Arsenic | ND | 0.99 | mg/kg wet | | | | | | | |
| Barium | ND | 0.99 | mg/kg wet | | | | | | | |
| Cadmium | ND | 0.49 | mg/kg wet | | | | | | | |
| Chromium | ND | 0.99 | mg/kg wet | | | | | | | |
| Lead | ND | 4.93 | mg/kg wet | | | | | | | |
| Lead | ND | 4.93 | mg/kg wet | | | | | | | |
| Selenium | ND | 4.93 | mg/kg wet | | | | | | | |
| Silver | ND | 0.49 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Arsenic | 285 | 3.17 | mg/kg wet | 360.0 | | 79 | 71-102 | | | |
| Barium | 283 | 3.17 | mg/kg wet | 332.0 | | 85 | 80-120 | | | |
| Cadmium | 188 | 1.59 | mg/kg wet | 238.0 | | 79 | 74-105 | | | |
| Chromium | 164 | 3.17 | mg/kg wet | 199.0 | | 82 | 80-120 | | | |
| Lead | 85.0 | 15.9 | mg/kg wet | 100.0 | | 85 | 80-120 | | | |
| Lead | 85.0 | 15.9 | mg/kg wet | 100.0 | | 85 | 80-120 | | | |
| Selenium | 145 | 15.9 | mg/kg wet | 170.0 | | 85 | 80-120 | | | |
| Silver | 74.5 | 1.59 | mg/kg wet | 88.60 | | 84 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Arsenic | 299 | 3.08 | mg/kg wet | 360.0 | | 83 | 71-102 | 5 | 30 | |
| Barium | 276 | 3.08 | mg/kg wet | 332.0 | | 83 | 80-120 | 2 | 30 | |
| Cadmium | 194 | 1.54 | mg/kg wet | 238.0 | | 81 | 74-105 | 3 | 30 | |
| Chromium | 173 | 3.08 | mg/kg wet | 199.0 | | 87 | 80-120 | 5 | 30 | |
| Lead | 89.5 | 15.4 | mg/kg wet | 100.0 | | 89 | 80-120 | 5 | 30 | |
| Lead | 89.5 | 15.4 | mg/kg wet | 100.0 | | 89 | 80-120 | 5 | 30 | |
| Selenium | 151 | 15.4 | mg/kg wet | 170.0 | | 89 | 80-120 | 4 | 30 | |
| Silver | 78.2 | 1.54 | mg/kg wet | 88.60 | | 88 | 80-120 | 5 | 30 | |
| **Batch DF42509 - 245.1/7470A** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Mercury | ND | 0.029 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Mercury | 13.1 | 3.19 | mg/kg wet | 14.40 | | 91 | 55.49-109.03 | | | |
| **LCS Dup** | | | | | | | | | | |
| Mercury | 11.1 | 2.87 | mg/kg wet | 14.40 | | 77 | 55.49-109.03 | 17 | 30 | |
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DF42521 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DF42521 - 5035** | | | | | | | | | | |
| 1,1-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dioxane | ND | 0.100 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Acetone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromoform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Carbon Disulfide | ND | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Chloroform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromomethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DF42521 - 5035** | | | | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methylene Chloride | ND | 0.0250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.0050 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 0.0200 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.0100 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.0050 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.0100 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0465* | | mg/kg wet | *0.05000* | | *93* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0465* | | mg/kg wet | *0.05000* | | *93* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0484* | | mg/kg wet | *0.05000* | | *97* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0468* | | mg/kg wet | *0.05000* | | *94* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0473 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| 1,1,1-Trichloroethane | 0.0496 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 0.0385 | 0.0050 | mg/kg wet | 0.05000 | | 77 | 40-160 | | | |
| 1,1,2-Trichloroethane | 0.0426 | 0.0050 | mg/kg wet | 0.05000 | | 85 | 70-130 | | | |
| 1,1-Dichloroethane | 0.0432 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 70-130 | | | |
| 1,1-Dichloroethene | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,1-Dichloropropene | 0.0469 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| 1,2,3-Trichloropropane | 0.0356 | 0.0050 | mg/kg wet | 0.05000 | | 71 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0363 | 0.0050 | mg/kg wet | 0.05000 | | 73 | 70-130 | | | |
| 1,2-Dibromoethane | 0.0428 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 70-130 | | | |
| 1,2-Dichlorobenzene | 0.0451 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| 1,2-Dichloroethane | 0.0424 | 0.0050 | mg/kg wet | 0.05000 | | 85 | 70-130 | | | |
| 1,2-Dichloropropane | 0.0422 | 0.0050 | mg/kg wet | 0.05000 | | 84 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0479 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| 1,3-Dichlorobenzene | 0.0466 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |
| 1,3-Dichloropropane | 0.0422 | 0.0050 | mg/kg wet | 0.05000 | | 84 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DF42521 - 5035** | | | | | | | | | | |
| 1,4-Dichlorobenzene | 0.0460 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| 1,4-Dioxane | 0.800 | 0.100 | mg/kg wet | 1.000 | | 80 | 70-130 | | | |
| 2,2-Dichloropropane | 0.0492 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| 2-Butanone | 0.225 | 0.0500 | mg/kg wet | 0.2500 | | 90 | 40-160 | | | |
| 2-Chlorotoluene | 0.0456 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| 2-Hexanone | 0.184 | 0.0500 | mg/kg wet | 0.2500 | | 74 | 40-160 | | | |
| 4-Chlorotoluene | 0.0454 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| 4-Isopropyltoluene | 0.0463 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 0.175 | 0.0500 | mg/kg wet | 0.2500 | | 70 | 40-160 | | | |
| Acetone | 0.334 | 0.0500 | mg/kg wet | 0.2500 | | 134 | 40-160 | | | |
| Benzene | 0.0456 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | | | |
| Bromobenzene | 0.0464 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |
| Bromochloromethane | 0.0465 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |
| Bromodichloromethane | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Bromoform | 0.0415 | 0.0050 | mg/kg wet | 0.05000 | | 83 | 40-160 | | | |
| Bromomethane | 0.0572 | 0.0100 | mg/kg wet | 0.05000 | | 114 | 40-160 | | | |
| Carbon Disulfide | 0.0492 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Carbon Tetrachloride | 0.0496 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| Chlorobenzene | 0.0464 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |
| Chloroethane | 0.0537 | 0.0100 | mg/kg wet | 0.05000 | | 107 | 40-160 | | | |
| Chloroform | 0.0452 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| Chloromethane | 0.0482 | 0.0100 | mg/kg wet | 0.05000 | | 96 | 40-160 | | | |
| cis-1,2-Dichloroethene | 0.0475 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| cis-1,3-Dichloropropene | 0.0475 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 40-160 | | | |
| Dibromochloromethane | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 40-160 | | | |
| Dibromomethane | 0.0429 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 70-130 | | | |
| Dichlorodifluoromethane | 0.0463 | 0.0100 | mg/kg wet | 0.05000 | | 93 | 40-160 | | | |
| Diethyl Ether | 0.0460 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| Di-isopropyl ether | 0.0433 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 0.0448 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| Ethylbenzene | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| Hexachlorobutadiene | 0.0493 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 40-160 | | | |
| Isopropylbenzene | 0.0520 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Methyl tert-Butyl Ether | 0.0437 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 70-130 | | | |
| Methylene Chloride | 0.0472 | 0.0250 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| Naphthalene | 0.0451 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 40-160 | | | |
| n-Butylbenzene | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| n-Propylbenzene | 0.0472 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| sec-Butylbenzene | 0.0449 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| Styrene | 0.0475 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 40-160 | | | |
| tert-Butylbenzene | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Tertiary-amyl methyl ether | 0.0449 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | | | |
| Tetrachloroethene | 0.0521 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| Tetrahydrofuran | 0.0353 | 0.0200 | mg/kg wet | 0.05000 | | 71 | 70-130 | | | |
| Toluene | 0.0469 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DF42521 - 5035** | | | | | | | | | | |
| trans-1,2-Dichloroethene | 0.0483 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| trans-1,3-Dichloropropene | 0.0439 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | | | |
| Trichloroethene | 0.0476 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| Trichlorofluoromethane | 0.0533 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 40-160 | | | |
| Vinyl Chloride | 0.0528 | 0.0100 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Xylene O | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| Xylene P,M | 0.101 | 0.0100 | mg/kg wet | 0.1000 | | 101 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0432* | | mg/kg wet | *0.05000* | | *86* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0495* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0473* | | mg/kg wet | *0.05000* | | *95* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0472* | | mg/kg wet | *0.05000* | | *94* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0483 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 2 | 20 | |
| 1,1,1-Trichloroethane | 0.0489 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 1 | 20 | |
| 1,1,2,2-Tetrachloroethane | 0.0426 | 0.0050 | mg/kg wet | 0.05000 | | 85 | 40-160 | 10 | 20 | |
| 1,1,2-Trichloroethane | 0.0432 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 70-130 | 1 | 20 | |
| 1,1-Dichloroethane | 0.0441 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | 2 | 20 | |
| 1,1-Dichloroethene | 0.0519 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 0.6 | 20 | |
| 1,1-Dichloropropene | 0.0464 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 1 | 20 | |
| 1,2,3-Trichlorobenzene | 0.0540 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 13 | 20 | |
| 1,2,3-Trichloropropane | 0.0389 | 0.0050 | mg/kg wet | 0.05000 | | 78 | 70-130 | 9 | 20 | |
| 1,2,4-Trichlorobenzene | 0.0560 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 12 | 20 | |
| 1,2,4-Trimethylbenzene | 0.0525 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 10 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 0.0400 | 0.0050 | mg/kg wet | 0.05000 | | 80 | 70-130 | 10 | 20 | |
| 1,2-Dibromoethane | 0.0439 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | 2 | 20 | |
| 1,2-Dichlorobenzene | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 11 | 20 | |
| 1,2-Dichloroethane | 0.0442 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | 4 | 20 | |
| 1,2-Dichloropropane | 0.0440 | 0.0050 | mg/kg wet | 0.05000 | | 88 | 70-130 | 4 | 20 | |
| 1,3,5-Trimethylbenzene | 0.0525 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 9 | 20 | |
| 1,3-Dichlorobenzene | 0.0524 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 12 | 20 | |
| 1,3-Dichloropropane | 0.0434 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 70-130 | 3 | 20 | |
| 1,4-Dichlorobenzene | 0.0507 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 10 | 20 | |
| 1,4-Dioxane | 0.769 | 0.100 | mg/kg wet | 1.000 | | 77 | 70-130 | 4 | 20 | |
| 2,2-Dichloropropane | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 0.4 | 20 | |
| 2-Butanone | 0.222 | 0.0500 | mg/kg wet | 0.2500 | | 89 | 40-160 | 1 | 20 | |
| 2-Chlorotoluene | 0.0496 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 9 | 20 | |
| 2-Hexanone | 0.179 | 0.0500 | mg/kg wet | 0.2500 | | 72 | 40-160 | 3 | 20 | |
| 4-Chlorotoluene | 0.0500 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 10 | 20 | |
| 4-Isopropyltoluene | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 8 | 20 | |
| 4-Methyl-2-Pentanone | 0.173 | 0.0500 | mg/kg wet | 0.2500 | | 69 | 40-160 | 1 | 20 | |
| Acetone | 0.309 | 0.0500 | mg/kg wet | 0.2500 | | 124 | 40-160 | 8 | 20 | |
| Benzene | 0.0463 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 2 | 20 | |
| Bromobenzene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 12 | 20 | |
| Bromochloromethane | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 3 | 20 | |
| Bromodichloromethane | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 3 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DF42521 - 5035** | | | | | | | | | | |
| Bromoform | 0.0431 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 40-160 | 4 | 20 | |
| Bromomethane | 0.0571 | 0.0100 | mg/kg wet | 0.05000 | | 114 | 40-160 | 0.2 | 20 | |
| Carbon Disulfide | 0.0510 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 4 | 20 | |
| Carbon Tetrachloride | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 0.9 | 20 | |
| Chlorobenzene | 0.0475 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 2 | 20 | |
| Chloroethane | 0.0540 | 0.0100 | mg/kg wet | 0.05000 | | 108 | 40-160 | 0.5 | 20 | |
| Chloroform | 0.0468 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 3 | 20 | |
| Chloromethane | 0.0476 | 0.0100 | mg/kg wet | 0.05000 | | 95 | 40-160 | 1 | 20 | |
| cis-1,2-Dichloroethene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 2 | 20 | |
| cis-1,3-Dichloropropene | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 40-160 | 5 | 20 | |
| Dibromochloromethane | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 40-160 | 4 | 20 | |
| Dibromomethane | 0.0444 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | 3 | 20 | |
| Dichlorodifluoromethane | 0.0459 | 0.0100 | mg/kg wet | 0.05000 | | 92 | 40-160 | 0.9 | 20 | |
| Diethyl Ether | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 3 | 20 | |
| Di-isopropyl ether | 0.0453 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | 5 | 20 | |
| Ethyl tertiary-butyl ether | 0.0463 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 3 | 20 | |
| Ethylbenzene | 0.0471 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 0.3 | 20 | |
| Hexachlorobutadiene | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 40-160 | 9 | 20 | |
| Isopropylbenzene | 0.0563 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | 8 | 20 | |
| Methyl tert-Butyl Ether | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 5 | 20 | |
| Methylene Chloride | 0.0479 | 0.0250 | mg/kg wet | 0.05000 | | 96 | 70-130 | 1 | 20 | |
| Naphthalene | 0.0510 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 40-160 | 12 | 20 | |
| n-Butylbenzene | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 8 | 20 | |
| n-Propylbenzene | 0.0512 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 8 | 20 | |
| sec-Butylbenzene | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 8 | 20 | |
| Styrene | 0.0481 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 40-160 | 1 | 20 | |
| tert-Butylbenzene | 0.0526 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 9 | 20 | |
| Tertiary-amyl methyl ether | 0.0469 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 4 | 20 | |
| Tetrachloroethene | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 2 | 20 | |
| Tetrahydrofuran | 0.0364 | 0.0200 | mg/kg wet | 0.05000 | | 73 | 70-130 | 3 | 20 | |
| Toluene | 0.0476 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 1 | 20 | |
| trans-1,2-Dichloroethene | 0.0489 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 1 | 20 | |
| trans-1,3-Dichloropropene | 0.0460 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 5 | 20 | |
| Trichloroethene | 0.0473 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 0.7 | 20 | |
| Trichlorofluoromethane | 0.0532 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 40-160 | 0.2 | 20 | |
| Vinyl Chloride | 0.0517 | 0.0100 | mg/kg wet | 0.05000 | | 103 | 70-130 | 2 | 20 | |
| Xylene O | 0.0497 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 2 | 20 | |
| Xylene P,M | 0.101 | 0.0100 | mg/kg wet | 0.1000 | | 101 | 70-130 | 0.3 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0432* | | mg/kg wet | *0.05000* | | *86* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0475* | | mg/kg wet | *0.05000* | | *95* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0480* | | mg/kg wet | *0.05000* | | *96* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0469* | | mg/kg wet | *0.05000* | | *94* | *70-130* | | | |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DF42405 - 3546** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DF42405 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DF42405 - 3546** | | | | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyridine | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.31* | | mg/kg wet | *2.500* | | *92* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.87* | | mg/kg wet | *3.750* | | *103* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.56* | | mg/kg wet | *3.750* | | *95* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.19* | | mg/kg wet | *2.500* | | *88* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.31* | | mg/kg wet | *3.750* | | *88* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.29* | | mg/kg wet | *2.500* | | *92* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.66* | | mg/kg wet | *3.750* | | *97* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.43* | | mg/kg wet | *2.500* | | *97* | *30-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.13 | 0.025 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 1.76 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | | | |
| 1,2-Dichlorobenzene | 1.89 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| 1,3-Dichlorobenzene | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| 1,4-Dichlorobenzene | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 1.98 | 0.250 | mg/kg wet | 2.500 | | 79 | 30-130 | | | |
| 2,4-Dichlorophenol | 1.81 | 0.250 | mg/kg wet | 2.500 | | 72 | 30-130 | | | |
| 2,4-Dimethylphenol | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 30-130 | | | |
| 2,4-Dinitrophenol | 2.76 | 1.00 | mg/kg wet | 2.500 | | 110 | 15-140 | | | |
| 2,4-Dinitrotoluene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.36 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| 2-Chloronaphthalene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| 2-Chlorophenol | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 30-130 | | | |
| 2-Methylnaphthalene | 1.74 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | | | |
| 2-Methylphenol | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 15-140 | | | |
| 2-Nitrophenol | 1.95 | 0.500 | mg/kg wet | 2.500 | | 78 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| 3+4-Methylphenol | 4.12 | 0.250 | mg/kg wet | 5.000 | | 82 | 15-140 | | | |
| 4-Bromophenyl-phenylether | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DF42405 - 3546** | | | | | | | | | | |
| 4-Chloroaniline | 1.64 | 0.250 | mg/kg wet | 2.500 | | 65 | 15-140 | | | |
| 4-Nitrophenol | 2.23 | 1.00 | mg/kg wet | 2.500 | | 89 | 15-140 | | | |
| Acenaphthene | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Acenaphthylene | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Acetophenone | 1.99 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| Aniline | 1.24 | 0.250 | mg/kg wet | 2.500 | | 50 | 40-140 | | | |
| Anthracene | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Azobenzene | 2.06 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Benzo(a)anthracene | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Benzo(a)pyrene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.54 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 1.61 | 0.250 | mg/kg wet | 2.500 | | 64 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 1.89 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.71 | 0.250 | mg/kg wet | 2.500 | | 69 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Butylbenzylphthalate | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| Chrysene | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| Dibenzofuran | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Diethylphthalate | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Dimethylphthalate | 2.24 | 0.250 | mg/kg wet | 2.500 | | 89 | 15-140 | | | |
| Di-n-butylphthalate | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Di-n-octylphthalate | 2.16 | 0.500 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Fluoranthene | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Fluorene | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Hexachlorobenzene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Hexachlorobutadiene | 1.73 | 0.250 | mg/kg wet | 2.500 | | 69 | 40-140 | | | |
| Hexachloroethane | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.34 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Isophorone | 1.67 | 0.250 | mg/kg wet | 2.500 | | 67 | 40-140 | | | |
| Naphthalene | 1.71 | 0.250 | mg/kg wet | 2.500 | | 69 | 40-140 | | | |
| Nitrobenzene | 1.76 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | | | |
| N-Nitrosodimethylamine | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Pentachlorophenol | 2.11 | 1.00 | mg/kg wet | 2.500 | | 84 | 15-140 | | | |
| Phenanthrene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Phenol | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 15-140 | | | |
| Pyrene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Pyridine | 1.71 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.04* | | mg/kg wet | *2.500* | | *81* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.47* | | mg/kg wet | *3.750* | | *93* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.07* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.05* | | mg/kg wet | *2.500* | | *82* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.73* | | mg/kg wet | *3.750* | | *73* | *30-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DF42405 - 3546** | | | | | | | | | | |
| *Surrogate: Nitrobenzene-d5* | *1.84* | | mg/kg wet | *2.500* | | *74* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.09* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.36* | | mg/kg wet | *2.500* | | *94* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.29 | 0.025 | mg/kg wet | 2.500 | | 92 | 40-140 | 8 | 30 | |
| 1,2,4-Trichlorobenzene | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | 10 | 30 | |
| 1,2-Dichlorobenzene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 15 | 30 | |
| 1,3-Dichlorobenzene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 14 | 30 | |
| 1,4-Dichlorobenzene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 13 | 30 | |
| 2,4,5-Trichlorophenol | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 30-130 | 4 | 30 | |
| 2,4,6-Trichlorophenol | 2.14 | 0.250 | mg/kg wet | 2.500 | | 86 | 30-130 | 7 | 30 | |
| 2,4-Dichlorophenol | 2.02 | 0.250 | mg/kg wet | 2.500 | | 81 | 30-130 | 11 | 30 | |
| 2,4-Dimethylphenol | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 30-130 | 11 | 30 | |
| 2,4-Dinitrophenol | 2.98 | 1.00 | mg/kg wet | 2.500 | | 119 | 15-140 | 8 | 30 | |
| 2,4-Dinitrotoluene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 0.2 | 30 | |
| 2,6-Dinitrotoluene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 4 | 30 | |
| 2-Chloronaphthalene | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 7 | 30 | |
| 2-Chlorophenol | 2.23 | 0.250 | mg/kg wet | 2.500 | | 89 | 30-130 | 11 | 30 | |
| 2-Methylnaphthalene | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | 9 | 30 | |
| 2-Methylphenol | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 15-140 | 10 | 30 | |
| 2-Nitrophenol | 2.03 | 0.500 | mg/kg wet | 2.500 | | 81 | 30-130 | 4 | 30 | |
| 3,3´-Dichlorobenzidine | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 0.4 | 30 | |
| 3+4-Methylphenol | 4.63 | 0.250 | mg/kg wet | 5.000 | | 93 | 15-140 | 12 | 30 | |
| 4-Bromophenyl-phenylether | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 0.1 | 30 | |
| 4-Chloroaniline | 1.81 | 0.250 | mg/kg wet | 2.500 | | 72 | 15-140 | 10 | 30 | |
| 4-Nitrophenol | 2.37 | 1.00 | mg/kg wet | 2.500 | | 95 | 15-140 | 6 | 30 | |
| Acenaphthene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 6 | 30 | |
| Acenaphthylene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 6 | 30 | |
| Acetophenone | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 12 | 30 | |
| Aniline | 1.41 | 0.250 | mg/kg wet | 2.500 | | 56 | 40-140 | 12 | 30 | |
| Anthracene | 2.36 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 3 | 30 | |
| Azobenzene | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 2 | 30 | |
| Benzo(a)anthracene | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 0.8 | 30 | |
| Benzo(a)pyrene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 0.6 | 30 | |
| Benzo(b)fluoranthene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 2 | 30 | |
| Benzo(g,h,i)perylene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 2 | 30 | |
| Benzo(k)fluoranthene | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 4 | 30 | |
| bis(2-Chloroethoxy)methane | 1.74 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | 8 | 30 | |
| bis(2-Chloroethyl)ether | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 11 | 30 | |
| bis(2-chloroisopropyl)Ether | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | 10 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 3 | 30 | |
| Butylbenzylphthalate | 2.39 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 2 | 30 | |
| Chrysene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 2 | 30 | |
| Dibenzo(a,h)Anthracene | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 1 | 30 | |
| Dibenzofuran | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 5 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DF42405 - 3546** | | | | | | | | | | |
| Diethylphthalate | 2.41 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 4 | 30 | |
| Dimethylphthalate | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 15-140 | 4 | 30 | |
| Di-n-butylphthalate | 2.36 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 4 | 30 | |
| Di-n-octylphthalate | 2.22 | 0.500 | mg/kg wet | 2.500 | | 89 | 40-140 | 3 | 30 | |
| Fluoranthene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 4 | 30 | |
| Fluorene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 5 | 30 | |
| Hexachlorobenzene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 2 | 30 | |
| Hexachlorobutadiene | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | 9 | 30 | |
| Hexachloroethane | 2.19 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 13 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 0.6 | 30 | |
| Isophorone | 1.77 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | 6 | 30 | |
| Naphthalene | 1.87 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | 9 | 30 | |
| Nitrobenzene | 1.97 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | 11 | 30 | |
| N-Nitrosodimethylamine | 2.34 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 9 | 30 | |
| Pentachlorophenol | 2.17 | 1.00 | mg/kg wet | 2.500 | | 87 | 15-140 | 3 | 30 | |
| Phenanthrene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 2 | 30 | |
| Phenol | 2.06 | 0.250 | mg/kg wet | 2.500 | | 83 | 15-140 | 12 | 30 | |
| Pyrene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 2 | 30 | |
| Pyridine | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | 14 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.18* | | mg/kg wet | *2.500* | | *87* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.47* | | mg/kg wet | *3.750* | | *93* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.36* | | mg/kg wet | *3.750* | | *90* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.17* | | mg/kg wet | *2.500* | | *87* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.01* | | mg/kg wet | *3.750* | | *80* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.92* | | mg/kg wet | *2.500* | | *77* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.42* | | mg/kg wet | *3.750* | | *91* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.35* | | mg/kg wet | *2.500* | | *94* | *30-130* | | | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DF42407 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DF42407 - 3540C** | | | | | | | | | | |
| Aroclor 1262 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0190* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0187* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 86 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 86 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 88 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 89 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0186* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0187* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0199* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 84 | 40-140 | 2 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 84 | 40-140 | 2 | 30 | |
| Aroclor 1260 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 87 | 40-140 | 2 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 88 | 40-140 | 1 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0185* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0186* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0194* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| **Batch DF42506 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DF42506 - 3540C** | | | | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0239* | | mg/kg wet | *0.02500* | | *96* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0246* | | mg/kg wet | *0.02500* | | *99* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0196* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0199* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 97 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 101 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 107 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0247* | | mg/kg wet | *0.02500* | | *99* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0255* | | mg/kg wet | *0.02500* | | *102* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0207* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0199* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | 0.6 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 97 | 40-140 | 0.4 | 30 | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 100 | 40-140 | 1 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 106 | 40-140 | 1 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0245* | | mg/kg wet | *0.02500* | | *98* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0252* | | mg/kg wet | *0.02500* | | *101* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0209* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0201* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DF42404 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 4,4´-DDD | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDD [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Chlordane (Total) | ND | 0.0200 | mg/kg wet | | | | | | | |
| Chlordane (Total) [2C] | ND | 0.0200 | mg/kg wet | | | | | | | |
| delta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8081B Organochlorine Pesticides | | | | | | | | | | |
| **Batch DF42404 - 3546** | | | | | | | | | | |
| delta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) [2C] | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Toxaphene | ND | 0.125 | mg/kg wet | | | | | | | |
| Toxaphene [2C] | ND | 0.125 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0121* | | mg/kg wet | *0.01250* | | *96* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0119* | | mg/kg wet | *0.01250* | | *96* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0126* | | mg/kg wet | *0.01250* | | *101* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0121* | | mg/kg wet | *0.01250* | | *97* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 4,4´-DDD | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | | | |
| 4,4´-DDD [2C] | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |
| 4,4´-DDE | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| 4,4´-DDE [2C] | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | | | |
| 4,4´-DDT | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | | | |
| 4,4´-DDT [2C] | 0.0122 | 0.0025 | mg/kg wet | 0.01250 | | 98 | 40-140 | | | |
| Aldrin | 0.0121 | 0.0025 | mg/kg wet | 0.01250 | | 97 | 40-140 | | | |
| Aldrin [2C] | 0.0117 | 0.0025 | mg/kg wet | 0.01250 | | 94 | 40-140 | | | |
| alpha-BHC | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| alpha-BHC [2C] | 0.0124 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | | | |
| alpha-Chlordane | 0.0122 | 0.0025 | mg/kg wet | 0.01250 | | 98 | 40-140 | | | |
| alpha-Chlordane [2C] | 0.0119 | 0.0025 | mg/kg wet | 0.01250 | | 95 | 40-140 | | | |
| beta-BHC | 0.0122 | 0.0025 | mg/kg wet | 0.01250 | | 97 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DF42404 - 3546** | | | | | | | | | | |
| beta-BHC [2C] | 0.0119 | 0.0025 | mg/kg wet | 0.01250 | | 95 | 40-140 | | | |
| delta-BHC | 0.0109 | 0.0025 | mg/kg wet | 0.01250 | | 87 | 40-140 | | | |
| delta-BHC [2C] | 0.0106 | 0.0025 | mg/kg wet | 0.01250 | | 84 | 40-140 | | | |
| Dieldrin | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Dieldrin [2C] | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Endosulfan I | 0.0124 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | | | |
| Endosulfan I [2C] | 0.0121 | 0.0025 | mg/kg wet | 0.01250 | | 96 | 40-140 | | | |
| Endosulfan II | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Endosulfan II [2C] | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | | | |
| Endosulfan Sulfate | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | | | |
| Endosulfan Sulfate [2C] | 0.0124 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | | | |
| Endrin | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Endrin [2C] | 0.0123 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | | | |
| Endrin Ketone | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | | | |
| Endrin Ketone [2C] | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| gamma-BHC (Lindane) | 0.0125 | 0.0015 | mg/kg wet | 0.01250 | | 100 | 40-140 | | | |
| gamma-BHC (Lindane) [2C] | 0.0121 | 0.0015 | mg/kg wet | 0.01250 | | 97 | 40-140 | | | |
| gamma-Chlordane | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| gamma-Chlordane [2C] | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| Heptachlor | 0.0121 | 0.0025 | mg/kg wet | 0.01250 | | 97 | 40-140 | | | |
| Heptachlor [2C] | 0.0118 | 0.0025 | mg/kg wet | 0.01250 | | 94 | 40-140 | | | |
| Heptachlor Epoxide | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | | | |
| Heptachlor Epoxide [2C] | 0.0122 | 0.0025 | mg/kg wet | 0.01250 | | 98 | 40-140 | | | |
| Hexachlorobenzene | 0.0119 | 0.0025 | mg/kg wet | 0.01250 | | 95 | 40-140 | | | |
| Hexachlorobenzene [2C] | 0.0113 | 0.0025 | mg/kg wet | 0.01250 | | 90 | 40-140 | | | |
| Methoxychlor | 0.0119 | 0.0025 | mg/kg wet | 0.01250 | | 95 | 40-140 | | | |
| Methoxychlor [2C] | 0.0113 | 0.0025 | mg/kg wet | 0.01250 | | 90 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0122* | | mg/kg wet | *0.01250* | | *98* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0120* | | mg/kg wet | *0.01250* | | *96* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0118* | | mg/kg wet | *0.01250* | | *94* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0117* | | mg/kg wet | *0.01250* | | *93* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 4,4´-DDD | 0.0157 | 0.0025 | mg/kg wet | 0.01250 | | 126 | 40-140 | 8 | 30 | |
| 4,4´-DDD [2C] | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 9 | 30 | |
| 4,4´-DDE | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 8 | 30 | |
| 4,4´-DDE [2C] | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | 8 | 30 | |
| 4,4´-DDT | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | 5 | 30 | |
| 4,4´-DDT [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 5 | 30 | |
| Aldrin | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 11 | 30 | |
| Aldrin [2C] | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | 11 | 30 | |
| alpha-BHC | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 10 | 30 | |
| alpha-BHC [2C] | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 10 | 30 | |
| alpha-Chlordane | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 8 | 30 | |
| alpha-Chlordane [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 9 | 30 | |
| beta-BHC | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 8 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DF42404 - 3546** | | | | | | | | | | |
| beta-BHC [2C] | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | 8 | 30 | |
| delta-BHC | 0.0118 | 0.0025 | mg/kg wet | 0.01250 | | 94 | 40-140 | 8 | 30 | |
| delta-BHC [2C] | 0.0115 | 0.0025 | mg/kg wet | 0.01250 | | 92 | 40-140 | 8 | 30 | |
| Dieldrin | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 9 | 30 | |
| Dieldrin [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 9 | 30 | |
| Endosulfan I | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 8 | 30 | |
| Endosulfan I [2C] | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | 8 | 30 | |
| Endosulfan II | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 8 | 30 | |
| Endosulfan II [2C] | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 8 | 30 | |
| Endosulfan Sulfate | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 8 | 30 | |
| Endosulfan Sulfate [2C] | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | 8 | 30 | |
| Endrin | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 8 | 30 | |
| Endrin [2C] | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | 8 | 30 | |
| Endrin Ketone | 0.0150 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | 7 | 30 | |
| Endrin Ketone [2C] | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 8 | 30 | |
| gamma-BHC (Lindane) | 0.0137 | 0.0015 | mg/kg wet | 0.01250 | | 110 | 40-140 | 9 | 30 | |
| gamma-BHC (Lindane) [2C] | 0.0133 | 0.0015 | mg/kg wet | 0.01250 | | 106 | 40-140 | 9 | 30 | |
| gamma-Chlordane | 0.0155 | 0.0025 | mg/kg wet | 0.01250 | | 124 | 40-140 | 9 | 30 | |
| gamma-Chlordane [2C] | 0.0148 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 9 | 30 | |
| Heptachlor | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | 10 | 30 | |
| Heptachlor [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 9 | 30 | |
| Heptachlor Epoxide | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | 8 | 30 | |
| Heptachlor Epoxide [2C] | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 8 | 30 | |
| Hexachlorobenzene | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 9 | 30 | |
| Hexachlorobenzene [2C] | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | 11 | 30 | |
| Methoxychlor | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | 5 | 30 | |
| Methoxychlor [2C] | 0.0118 | 0.0025 | mg/kg wet | 0.01250 | | 94 | 40-140 | 4 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0124* | | mg/kg wet | *0.01250* | | *99* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0123* | | mg/kg wet | *0.01250* | | *99* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0125* | | mg/kg wet | *0.01250* | | *100* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0122* | | mg/kg wet | *0.01250* | | *98* | *30-150* | | | |
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DF42528 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 2,4,5-T | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-T [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4-D | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-D [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-DB | ND | 0.048 | mg/kg wet | | | | | | | |
| 2,4-DB [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| Dalapon | ND | 0.046 | mg/kg wet | | | | | | | |
| Dalapon [2C] | ND | 0.046 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DF42528 - 3546** | | | | | | | | | | |
| Dicamba | ND | 0.009 | mg/kg wet | | | | | | | |
| Dicamba [2C] | ND | 0.009 | mg/kg wet | | | | | | | |
| Dichlorprop | ND | 0.047 | mg/kg wet | | | | | | | |
| Dichlorprop [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| Dinoseb | ND | 0.048 | mg/kg wet | | | | | | | |
| Dinoseb [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| MCPA | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPA [2C] | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPP | ND | 2.35 | mg/kg wet | | | | | | | |
| MCPP [2C] | ND | 2.35 | mg/kg wet | | | | | | | |
| *Surrogate: DCAA* | *0.187* | | mg/kg wet | *0.2000* | | *94* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.161* | | mg/kg wet | *0.2000* | | *81* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 2,4,5-T | 0.013 | 0.010 | mg/kg wet | 0.01900 | | 68 | 40-140 | | | |
| 2,4,5-T [2C] | 0.012 | 0.010 | mg/kg wet | 0.01900 | | 62 | 40-140 | | | |
| 2,4,5-TP (Silvex) | 0.014 | 0.010 | mg/kg wet | 0.01900 | | 74 | 40-140 | | | |
| 2,4,5-TP (Silvex) [2C] | 0.013 | 0.010 | mg/kg wet | 0.01900 | | 70 | 40-140 | | | |
| 2,4-D | 0.129 | 0.047 | mg/kg wet | 0.1880 | | 69 | 40-140 | | | |
| 2,4-D [2C] | 0.112 | 0.047 | mg/kg wet | 0.1880 | | 60 | 40-140 | | | |
| 2,4-DB | 0.154 | 0.048 | mg/kg wet | 0.1900 | | 81 | 40-140 | | | |
| 2,4-DB [2C] | 0.142 | 0.048 | mg/kg wet | 0.1900 | | 75 | 40-140 | | | |
| Dalapon | 0.301 | 0.046 | mg/kg wet | 0.4550 | | 66 | 40-140 | | | |
| Dalapon [2C] | 0.296 | 0.046 | mg/kg wet | 0.4550 | | 65 | 40-140 | | | |
| Dicamba | 0.012 | 0.009 | mg/kg wet | 0.01880 | | 64 | 40-140 | | | |
| Dicamba [2C] | 0.014 | 0.009 | mg/kg wet | 0.01880 | | 72 | 40-140 | | | |
| Dichlorprop | 0.188 | 0.047 | mg/kg wet | 0.1880 | | 100 | 40-140 | | | |
| Dichlorprop [2C] | 0.145 | 0.047 | mg/kg wet | 0.1880 | | 77 | 40-140 | | | |
| Dinoseb | 0.016 | 0.048 | mg/kg wet | 0.09500 | | 16 | 10-100 | | | |
| Dinoseb [2C] | 0.016 | 0.048 | mg/kg wet | 0.09500 | | 16 | 10-100 | | | |
| MCPA | 16.2 | 2.32 | mg/kg wet | 18.60 | | 87 | 40-140 | | | |
| MCPA [2C] | 15.3 | 2.32 | mg/kg wet | 18.60 | | 82 | 40-140 | | | |
| MCPP | 15.2 | 2.35 | mg/kg wet | 18.80 | | 81 | 40-140 | | | |
| MCPP [2C] | 15.5 | 2.35 | mg/kg wet | 18.80 | | 82 | 40-140 | | | |
| *Surrogate: DCAA* | *0.221* | | mg/kg wet | *0.2000* | | *110* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.182* | | mg/kg wet | *0.2000* | | *91* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 2,4,5-T | 0.015 | 0.010 | mg/kg wet | 0.01900 | | 80 | 40-140 | 16 | 30 | |
| 2,4,5-T [2C] | 0.013 | 0.010 | mg/kg wet | 0.01900 | | 70 | 40-140 | 12 | 30 | |
| 2,4,5-TP (Silvex) | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 86 | 40-140 | 15 | 30 | |
| 2,4,5-TP (Silvex) [2C] | 0.014 | 0.010 | mg/kg wet | 0.01900 | | 76 | 40-140 | 8 | 30 | |
| 2,4-D | 0.146 | 0.047 | mg/kg wet | 0.1880 | | 78 | 40-140 | 12 | 30 | |
| 2,4-D [2C] | 0.132 | 0.047 | mg/kg wet | 0.1880 | | 70 | 40-140 | 16 | 30 | |
| 2,4-DB | 0.175 | 0.048 | mg/kg wet | 0.1900 | | 92 | 40-140 | 13 | 30 | |
| 2,4-DB [2C] | 0.159 | 0.048 | mg/kg wet | 0.1900 | | 84 | 40-140 | 12 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DF42528 - 3546** | | | | | | | | | | |
| Dalapon | 0.327 | 0.046 | mg/kg wet | 0.4550 | | 72 | 40-140 | 8 | 30 | |
| Dalapon [2C] | 0.315 | 0.046 | mg/kg wet | 0.4550 | | 69 | 40-140 | 6 | 30 | |
| Dicamba | 0.014 | 0.009 | mg/kg wet | 0.01880 | | 76 | 40-140 | 17 | 30 | |
| Dicamba [2C] | 0.016 | 0.009 | mg/kg wet | 0.01880 | | 84 | 40-140 | 15 | 30 | |
| Dichlorprop | 0.213 | 0.047 | mg/kg wet | 0.1880 | | 113 | 40-140 | 13 | 30 | |
| Dichlorprop [2C] | 0.162 | 0.047 | mg/kg wet | 0.1880 | | 86 | 40-140 | 12 | 30 | |
| Dinoseb | 0.013 | 0.048 | mg/kg wet | 0.09500 | | 14 | 10-100 | 19 | 30 | |
| Dinoseb [2C] | 0.014 | 0.048 | mg/kg wet | 0.09500 | | 14 | 10-100 | 13 | 30 | |
| MCPA | 17.4 | 2.32 | mg/kg wet | 18.60 | | 94 | 40-140 | 8 | 30 | |
| MCPA [2C] | 17.3 | 2.32 | mg/kg wet | 18.60 | | 93 | 40-140 | 12 | 30 | |
| MCPP | 17.5 | 2.35 | mg/kg wet | 18.80 | | 93 | 40-140 | 14 | 30 | |
| MCPP [2C] | 16.5 | 2.35 | mg/kg wet | 18.80 | | 88 | 40-140 | 6 | 30 | |
| *Surrogate: DCAA* | *0.219* | | mg/kg wet | *0.2000* | | *110* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.180* | | mg/kg wet | *0.2000* | | *90* | *30-150* | | | |
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DF42504 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *3.38* | | mg/kg wet | *5.000* | | *68* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 65 | 40-140 | | | |
| Docosane (C22) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| Dodecane (C12) | 1.7 | 0.2 | mg/kg wet | 2.500 | | 67 | 40-140 | | | |
| Eicosane (C20) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| Hexacosane (C26) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| Hexadecane (C16) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | | | |
| Hexatriacontane (C36) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Nonadecane (C19) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| Nonane (C9) | 1.4 | 0.2 | mg/kg wet | 2.500 | | 57 | 30-140 | | | |
| Octacosane (C28) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DF42504 - 3546** | | | | | | | | | | |
| Octadecane (C18) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| Tetracosane (C24) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Tetradecane (C14) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 26.1 | 10.0 | mg/kg wet | 35.00 | | 75 | 40-140 | | | |
| Triacontane (C30) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *3.56* | | mg/kg wet | *5.000* | | *71* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.5 | 0.2 | mg/kg wet | 2.500 | | 59 | 40-140 | 8 | 25 | |
| Docosane (C22) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | 2 | 25 | |
| Dodecane (C12) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 63 | 40-140 | 5 | 25 | |
| Eicosane (C20) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 77 | 40-140 | 1 | 25 | |
| Hexacosane (C26) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | 3 | 25 | |
| Hexadecane (C16) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 70 | 40-140 | 3 | 25 | |
| Hexatriacontane (C36) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 1 | 25 | |
| Nonadecane (C19) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 0.04 | 25 | |
| Nonane (C9) | 1.3 | 0.2 | mg/kg wet | 2.500 | | 52 | 30-140 | 10 | 25 | |
| Octacosane (C28) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | 2 | 25 | |
| Octadecane (C18) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | 0.5 | 25 | |
| Tetracosane (C24) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | 2 | 25 | |
| Tetradecane (C14) | 1.7 | 0.2 | mg/kg wet | 2.500 | | 67 | 40-140 | 5 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 25.8 | 10.0 | mg/kg wet | 35.00 | | 74 | 40-140 | 1 | 25 | |
| Triacontane (C30) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | 2 | 25 | |
| *Surrogate: O-Terphenyl* | *3.49* | | mg/kg wet | *5.000* | | *70* | *40-140* | | | |
| **Classical Chemistry** | | | | | | | | | | |
| **Batch DF42434 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Reactive Cyanide | ND | 2.0 | mg/kg | | | | | | | |
| Reactive Sulfide | ND | 2.0 | mg/kg | | | | | | | |
| **LCS** | | | | | | | | | | |
| Reactive Cyanide | 4.1 | 2.0 | mg/kg | 100.3 | | 4 | 0.68-5.41 | | | |
| Reactive Sulfide | 2.1 | 2.0 | mg/kg | 10.00 | | 21 | 0-44 | | | |
| **Batch DF42446 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Conductivity | ND | 5 | umhos/cm | | | | | | | |
| **LCS** | | | | | | | | | | |
| Conductivity | 1400 | | umhos/cm | 1410 | | 100 | 90-110 | | | |
| **Batch DF42534 - General Preparation** | | | | | | | | | | |
| **Reference** | | | | | | | | | | |
| Flashpoint | 80 | | °F | 81.00 | | 99 | 97.9-102.1 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

**Notes and Definitions**

| | |
|---|---|
| WL | Results obtained from a deionized water leach of the sample. |
| U | Analyte included in the analysis, but not detected |
| RRF | Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration |
| Q | Calibration required quadratic regression (Q). |
| D | Diluted. |
| CD+ | Continuing Calibration %Diff/Drift is above control limit (CD+). |
| > | Greater than. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0927

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24F0927
Date Received: 6/24/2024
Project Due Date: 7/1/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.3 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: 6/24/24 Time: KF-15 By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted: Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 565123 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 565124 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 565133 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 565134 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 565135 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 2 | 565136 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 2 | 565137 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 3 | 565125 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 565126 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 565127 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 565128 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 565129 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 8 | 565130 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 9 | 565131 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 10 | 565132 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials
Are barcode labels on correct containers? Yes / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24F0927

Date Received: 6/24/2024

Are all QC stickers attached? Yes / No / NA

Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: [signature] Date & Time: 6/24/24 1740

Reviewed By: Date & Time: 6/24/24 18:15

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24F0927

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Is this project for any of the following?: | O CT RCP ◉ MA MCP O RGP | |
| Reporting Limits | | |
| Electonic Deliverables | ☑ Data Checker ☑ Other (Please Specify →) | ☑ Excel EDD |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | | PCB | Lead | RCRA 8 metals | PCBs via 3540C | TPH | SVOC - inc. PAH | Pest - inc. tox Herbicides | Reactivity | Conductivity | pH | Free Liquid | Flash Point | VOC - high | VOC - low | LEAD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6-21-24 | 1125 | Grab | Soil | E O | 9-10 | x | | | | | | | | | | | | | | X |
| 2 | 1 | 1205 | Grab | Soil | I-3 | 4-8 | x | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| 3 | 6-20-24 | 1000 | Grab | Soil | JJ-0.5 | 4-5 | x | | | X | | | | | | | | | | | |
| 4 | " | 1015 | Grab | Soil | II-0.5 | 4-5 | x | | | X | | | | | | | | | | | |
| 5 | | 1030 | Grab | Soil | HH-0.5 | 4-5 | x | | | X | | | | | | | | | | | |
| 6 | | 1050 | Grab | Soil | GG-2 | 4-5 | | | | X | | | | | | | | | | | |
| 7 | | 1105 | Grab | Soil | GG-1 | 4-5 | | | | X | | | | | | | | | | | |
| 8 | | 1120 | Grab | Soil | FF-1 | 4-5 | | | | X | | | | | | | | | | | |
| 9 | | 1135 | Grab | Soil | FF-2 | 4-5 | | | | X | | | | | | | | | | | |
| 10 | | 1140 | Grab | Soil | BB-1 | 4-5 | | | | X | | | | | | | | | | | |

**Container Type:** AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — AG | | AS | AS | | | | | | | V | V |
**Container Volume:** 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10 | | 9 | 10 | | | | | | | 7 | 7 |
**Preservation Code:** 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1 | | 1 | 1 | | | | | | | 6 | 10
**Number of Containers per Sample:** — 1 | | 1 | 2 | | | | | | | 1 | 2

**Laboratory Use Only**
Cooler Present: Yes O Drop Off
Seals Intact: O Pickup
Cooler Temperature: 4.3 °C / Ca

**Sampled by :** DB and NR

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 6-21-24 1350 | Secured Fridge 6-21-24 1350 | 6/24/24 9:40 | 6/24/24 9:40 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| 6/24/24 16:29 | 6/24/24 16:29 | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24F0928**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 9:00 pm, Jul 01, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0928

## SAMPLE RECEIPT

The following samples were received on June 24, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Question I: Sample -19 for Metals was analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24F0928-01 | JJ-0.5 1-2 | Soil | 8082A |
| 24F0928-02 | II-0.5 1-2 | Soil | 8082A |
| 24F0928-03 | HH-0.5 1-2 | Soil | 8082A |
| 24F0928-04 | GG-2 1-2 | Soil | 8082A |
| 24F0928-05 | GG-1 1-2 | Soil | 8082A |
| 24F0928-06 | FF-1 1-2 | Soil | 8082A |
| 24F0928-07 | FF-2 1-2 | Soil | 8082A |
| 24F0928-08 | EE-1 3-4 | Soil | 8082A |
| 24F0928-09 | CC-0 5-6 | Soil | 8082A |
| 24F0928-10 | CC-1 5-6 | Soil | 8082A |
| 24F0928-11 | EE-2 3-4 | Soil | 8082A |
| 24F0928-12 | DD-2 3-4 | Soil | 8082A |
| 24F0928-13 | B-4 2-3 | Soil | 8082A |
| 24F0928-14 | B-3 2-3 | Soil | 8082A |
| 24F0928-15 | AA-3 3-4 | Soil | 8082A |
| 24F0928-16 | A-2 3-4 | Soil | 8082A |
| 24F0928-17 | BB-1 3-4 | Soil | 8082A |
| 24F0928-18 | BB-0 3-4 | Soil | 8082A |
| 24F0928-19 | G-5 5-6 | Soil | 6010D |
| 24F0928-20 | BO-10s 0-1 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0928

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**
24F0928-20 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0928

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0928

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24F0928-01 through 24F0928-20**

Matrices: ( ) Ground Water/Surface Water (X) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (X) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (X) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (X) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (X) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (X) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (X) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (X) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (X) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (X)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (X)* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: July 01, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: JJ-0.5 1-2
Date Sampled: 06/20/24 10:00
Percent Solids: 95
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 20:59 | --- | DF42506 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 20:59 | --- | DF42506 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 20:59 | --- | DF42506 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 20:59 | --- | DF42506 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 20:59 | --- | DF42506 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 06/26/24 20:59 | --- | DF42506 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 20:59 | --- | DF42506 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 20:59 | --- | DF42506 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 20:59 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *97 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: II-0.5 1-2
Date Sampled: 06/20/24 10:15
Percent Solids: 95
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:18 | --- | DF42506 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:18 | --- | DF42506 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:18 | --- | DF42506 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:18 | --- | DF42506 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:18 | --- | DF42506 |
| **Aroclor 1254 [2C]** | **0.4** (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:18 | --- | DF42506 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:18 | --- | DF42506 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:18 | --- | DF42506 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:18 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *93 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: HH-0.5 1-2
Date Sampled: 06/20/24 10:30
Percent Solids: 94
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:38 | --- | DF42506 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:38 | --- | DF42506 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:38 | --- | DF42506 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:38 | --- | DF42506 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:38 | --- | DF42506 |
| **Aroclor 1254 [2C]** | **1.3** (0.1) | --- | 8082A | --- | 2 | 06/27/24 11:54 | --- | DF42506 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:38 | --- | DF42506 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:38 | --- | DF42506 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:38 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *98 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: GG-2 1-2
Date Sampled: 06/20/24 10:50
Percent Solids: 97
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:57 | --- | DF42506 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:57 | --- | DF42506 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:57 | --- | DF42506 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:57 | --- | DF42506 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:57 | --- | DF42506 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:57 | --- | DF42506 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:57 | --- | DF42506 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:57 | --- | DF42506 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 21:57 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *88 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: GG-1 1-2
Date Sampled: 06/20/24 11:05
Percent Solids: 93
Initial Volume: 19.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:17 | --- | DF42506 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:17 | --- | DF42506 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:17 | --- | DF42506 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:17 | --- | DF42506 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:17 | --- | DF42506 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:17 | --- | DF42506 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:17 | --- | DF42506 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:17 | --- | DF42506 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:17 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *88 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-1 1-2
Date Sampled: 06/20/24 11:20
Percent Solids: 95
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:37 | --- | DF42506 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:37 | --- | DF42506 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:37 | --- | DF42506 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:37 | --- | DF42506 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:37 | --- | DF42506 |
| **Aroclor 1254 [2C]** | **0.3** (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:37 | --- | DF42506 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:37 | --- | DF42506 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:37 | --- | DF42506 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:37 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *95 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-2 1-2
Date Sampled: 06/20/24 11:35
Percent Solids: 95
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:57 | --- | DF42506 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:57 | --- | DF42506 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:57 | --- | DF42506 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:57 | --- | DF42506 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:57 | --- | DF42506 |
| **Aroclor 1254 [2C]** | **0.08** (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:57 | --- | DF42506 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:57 | --- | DF42506 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:57 | --- | DF42506 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 22:57 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *89 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-1 3-4
Date Sampled: 06/20/24 11:55
Percent Solids: 91
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 23:17 | --- | DF42506 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 23:17 | --- | DF42506 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 23:17 | --- | DF42506 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 23:17 | --- | DF42506 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 23:17 | --- | DF42506 |
| **Aroclor 1254 [2C]** | **0.1** (0.06) | --- | 8082A | --- | 1 | 06/26/24 23:17 | --- | DF42506 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 23:17 | --- | DF42506 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 23:17 | --- | DF42506 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 23:17 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *91 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CC-0 5-6
Date Sampled: 06/20/24 11:50
Percent Solids: 94
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 23:36 | --- | DF42506 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 23:36 | --- | DF42506 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 23:36 | --- | DF42506 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 23:36 | --- | DF42506 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 23:36 | --- | DF42506 |
| **Aroclor 1254** | **0.2** (0.05) | --- | 8082A | --- | 1 | 06/26/24 23:36 | --- | DF42506 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 23:36 | --- | DF42506 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 23:36 | --- | DF42506 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 23:36 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *62 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *41 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CC-1 5-6
Date Sampled: 06/20/24 11:55
Percent Solids: 91
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 23:56 | --- | DF42506 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 23:56 | --- | DF42506 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 23:56 | --- | DF42506 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 23:56 | --- | DF42506 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 23:56 | --- | DF42506 |
| **Aroclor 1254** | **0.6** (0.05) | --- | 8082A | --- | 1 | 06/26/24 23:56 | --- | DF42506 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 23:56 | --- | DF42506 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 23:56 | --- | DF42506 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 23:56 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *95 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: EE-2 3-4
Date Sampled: 06/20/24 12:00
Percent Solids: 92
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:16 | --- | DF42506 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:16 | --- | DF42506 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:16 | --- | DF42506 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:16 | --- | DF42506 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:16 | --- | DF42506 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:16 | --- | DF42506 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:16 | --- | DF42506 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:16 | --- | DF42506 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:16 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *68 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: DD-2 3-4
Date Sampled: 06/20/24 12:10
Percent Solids: 91
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:35 | --- | DF42506 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:35 | --- | DF42506 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:35 | --- | DF42506 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:35 | --- | DF42506 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:35 | --- | DF42506 |
| Aroclor 1254 [2C] | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:35 | --- | DF42506 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:35 | --- | DF42506 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:35 | --- | DF42506 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:35 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *72 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *64 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-4 2-3
Date Sampled: 06/20/24 13:30
Percent Solids: 93
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:55 | --- | DF42506 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:55 | --- | DF42506 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:55 | --- | DF42506 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:55 | --- | DF42506 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:55 | --- | DF42506 |
| Aroclor 1254 [2C] | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:55 | --- | DF42506 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:55 | --- | DF42506 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:55 | --- | DF42506 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 0:55 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *91 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-3 2-3
Date Sampled: 06/20/24 13:45
Percent Solids: 92
Initial Volume: 19.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 06/27/24 1:15 | --- | DF42506 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 06/27/24 1:15 | --- | DF42506 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 06/27/24 1:15 | --- | DF42506 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 06/27/24 1:15 | --- | DF42506 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 06/27/24 1:15 | --- | DF42506 |
| Aroclor 1254 [2C] | ND (0.06) | --- | 8082A | --- | 1 | 06/27/24 1:15 | --- | DF42506 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 06/27/24 1:15 | --- | DF42506 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 06/27/24 1:15 | --- | DF42506 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 06/27/24 1:15 | --- | DF42506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *96 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-3 3-4
Date Sampled: 06/20/24 14:05
Percent Solids: 94
Initial Volume: 19.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 17:32 | --- | DF42507 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 17:32 | --- | DF42507 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 17:32 | --- | DF42507 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 17:32 | --- | DF42507 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 17:32 | --- | DF42507 |
| **Aroclor 1254 [2C]** | **0.4** (0.05) | --- | 8082A | --- | 1 | 06/26/24 17:32 | --- | DF42507 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 17:32 | --- | DF42507 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 17:32 | --- | DF42507 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 17:32 | --- | DF42507 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *76 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *84 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-2 3-4
Date Sampled: 06/20/24 14:15
Percent Solids: 93
Initial Volume: 20.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 17:52 | --- | DF42507 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 17:52 | --- | DF42507 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 17:52 | --- | DF42507 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 17:52 | --- | DF42507 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 17:52 | --- | DF42507 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 06/26/24 17:52 | --- | DF42507 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 17:52 | --- | DF42507 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 17:52 | --- | DF42507 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 17:52 | --- | DF42507 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *50 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *50 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-1 3-4
Date Sampled: 06/20/24 14:40
Percent Solids: 87
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 18:11 | --- | DF42507 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 18:11 | --- | DF42507 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 18:11 | --- | DF42507 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 18:11 | --- | DF42507 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 18:11 | --- | DF42507 |
| **Aroclor 1254 [2C]** | **0.7** (0.06) | --- | 8082A | --- | 1 | 06/26/24 18:11 | --- | DF42507 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 18:11 | --- | DF42507 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 18:11 | --- | DF42507 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 06/26/24 18:11 | --- | DF42507 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BB-0 3-4
Date Sampled: 06/20/24 14:55
Percent Solids: 92
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 18:31 | --- | DF42507 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 18:31 | --- | DF42507 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 18:31 | --- | DF42507 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 18:31 | --- | DF42507 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 18:31 | --- | DF42507 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 06/26/24 18:31 | --- | DF42507 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 18:31 | --- | DF42507 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 18:31 | --- | DF42507 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 06/26/24 18:31 | --- | DF42507 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *74 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5 5-6
Date Sampled: 06/21/24 08:35
Percent Solids: 93

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-19
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **46.5** (5.19) | --- | 6010D | --- | 1 | KJB | 06/25/24 21:48 | 2.07 100 | DF42508 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BO-10s 0-1
Date Sampled: 06/21/24 09:15
Percent Solids: 96
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0928
ESS Laboratory Sample ID: 24F0928-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (21.2) | --- | 8082A | --- | 400 | 06/27/24 13:25 | --- | DF42507 |
| Aroclor 1221 | ND (21.2) | --- | 8082A | --- | 400 | 06/27/24 13:25 | --- | DF42507 |
| Aroclor 1232 | ND (21.2) | --- | 8082A | --- | 400 | 06/27/24 13:25 | --- | DF42507 |
| Aroclor 1242 | ND (21.2) | --- | 8082A | --- | 400 | 06/27/24 13:25 | --- | DF42507 |
| Aroclor 1248 | ND (21.2) | --- | 8082A | --- | 400 | 06/27/24 13:25 | --- | DF42507 |
| **Aroclor 1254 [2C]** | **317** (21.2) | --- | 8082A | --- | 400 | 06/27/24 13:25 | --- | DF42507 |
| Aroclor 1260 | ND (21.2) | --- | 8082A | --- | 400 | 06/27/24 13:25 | --- | DF42507 |
| Aroclor 1262 | ND (21.2) | --- | 8082A | --- | 400 | 06/27/24 13:25 | --- | DF42507 |
| Aroclor 1268 | ND (21.2) | --- | 8082A | --- | 400 | 06/27/24 13:25 | --- | DF42507 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | % | SD | 30-150 |
| *Surrogate: Tetrachloro-m-xylene* | % | SD | 30-150 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0928

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DF42508 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 4.93 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 85.0 | 15.9 | mg/kg wet | 100.0 | | 85 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 89.5 | 15.4 | mg/kg wet | 100.0 | | 89 | 80-120 | 5 | 30 | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DF42506 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0239* | | mg/kg wet | *0.02500* | | *96* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0246* | | mg/kg wet | *0.02500* | | *99* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0196* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0199* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 97 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 101 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 107 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0247* | | mg/kg wet | *0.02500* | | *99* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0255* | | mg/kg wet | *0.02500* | | *102* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0207* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0199* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 95 | 40-140 | 0.6 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 97 | 40-140 | 0.4 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0928

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DF42506 - 3540C** | | | | | | | | | | |
| Aroclor 1260 | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 100 | 40-140 | 1 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 106 | 40-140 | 1 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0245* | | mg/kg wet | *0.02500* | | *98* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0252* | | mg/kg wet | *0.02500* | | *101* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0209* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0201* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| **Batch DF42507 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0180* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0185* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0201* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 91 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 91 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 96 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0207* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0205* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 90 | 40-140 | 0.5 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 91 | 40-140 | 0.6 | 30 | |
| Aroclor 1260 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 93 | 40-140 | 1 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 95 | 40-140 | 0.9 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0928

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DF42507 - 3540C** | | | | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0188* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0194* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0207* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0207* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0928

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| SD | Surrogate recovery(ies) diluted below the MRL (SD). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0928

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24F0928
Date Received: 6/24/2024
Project Due Date: 7/1/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.3 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 565138 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 565139 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 565140 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 565141 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 565142 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 565143 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 565144 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 8 | 565145 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 9 | 565146 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 10 | 565147 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 11 | 565148 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 12 | 565149 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 13 | 565150 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 14 | 565151 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 15 | 565152 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 16 | 565153 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 17 | 565154 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 18 | 565155 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 19 | 565156 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 20 | 565157 | Yes | N/A | Yes | 4 oz. Jar | NP | |

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24F0928
Date Received: 6/24/2024

**2nd Review**

**Were all containers scanned into storage/lab?** Initials TD

| | |
|---|---|
| Are barcode labels on correct containers? | Yes / No |
| Are all Flashpoint stickers attached/container ID # circled? | Yes / No / NA |
| Are all Hex Chrome stickers attached? | Yes / No / NA |
| Are all QC stickers attached? | Yes / No / NA |
| Are VOA stickers attached if bubbles noted? | Yes / No / NA |

Completed By: [signature] Date & Time: 6/24/24 1750

Reviewed By: Date & Time: 6/24/24 1817

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24F0928

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Reporting Limits | | |

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | | Analysis: PCB |
|---|---|---|---|---|---|---|---|
| | 6-20-24 | 1000 | Grab | Soil | JJ-0.5 | 1-2 | X |
| | | 1015 | Grab | Soil | II-0.5 | 1-2 | X |
| | | 1030 | Grab | Soil | HH-0.5 | 1-2 | X |
| | | 1050 | Grab | Soil | GG-2 | 1-2 | X |
| | | 1105 | Grab | Soil | GG-1 | 1-2 | X |
| | | 1120 | Grab | Soil | FF-1 | 1-2 | X |
| | | 1135 | Grab | Soil | FF-2 | 1-2 | X |
| | | 1155 | Grab | Soil | EE-1 | 3-4 | X |
| | | 1150 | Grab | Soil | CC-0 | 5-6 | X |
| | | 1155 | Grab | Soil | CC-1 | 5-6 | X |

**Container Type:** AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — AG

**Container Volume:** 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10

**Preservation Code:** 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1

**Number of Containers per Sample:** 1

**Laboratory Use Only**

Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.3 °C IR

**Sampled by :** DB and NR

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 6-21-24 1350 | Secured Fridge 6-21-24 1350 | 6/24/24 9:40 | 6/24/24 9:40 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| 6/24/24 8:29 | 6/24/24 | | |

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24F0928

Turn Time: 5 Days
Regulatory State: Massachusetts
Is this project for any of the following?: O CT RCP ◉ MA MCP O RGP
Reporting Limits
Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | | PCB | Lead | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6-20-24 | 1200 | Grab | Soil | EE-2 | 3-4 | X | | | | | | | | | | | | | | | | | |
| | | 1210 | Grab | Soil | DD-2 | 3-4 | X | | | | | | | | | | | | | | | | | |
| | | 1330 | Grab | Soil | B-4 | 2-3 | X | | | | | | | | | | | | | | | | | |
| | | 1345 | Grab | Soil | B-3 | 2-3 | X | | | | | | | | | | | | | | | | | |
| | | 1405 | Grab | Soil | AA-3 | 3-4 | X | | | | | | | | | | | | | | | | | |
| | | 1415 | Grab | Soil | A-2 | 3-4 | X | | | | | | | | | | | | | | | | | |
| | | 1440 | Grab | Soil | BB-1 | 3-4 | X | | | | | | | | | | | | | | | | | |
| | | 1455 | Grab | Soil | BB 0 | 3-4 | X | | | | | | | | | | | | | | | | | |
| | 6/21/24 | 0835 | Grab | Soil | G-5 | 5-6 | X | | | | | | | | | | | | | | | | | |
| | | 0915 | Grab | Soil | BO-10S | 0-1 | X | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 |
| | | | | | | | | | | **Number of Containers per Sample:** | | 1 |

**Laboratory Use Only**
Cooler Present: YES O Drop Off
Seals Intact: O Pickup
Cooler Temperature: 4.3 °C / G

Sampled by : DB and NR

Comments: Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 6-21-24 1350 | Secured Fridge 6-21-24 1350 | 6/24/24 9:40 | 6/24/24 5:40 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| 6/24/24 16:25 | 6/24/24 | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24F0929**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 9:09 pm, Jul 01, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0929

## SAMPLE RECEIPT

The following samples were received on June 24, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Question I: All samples for Metals were analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24F0929-01 | BO-5W 0-1 | Soil | 8082A |
| 24F0929-02 | BO-10W 0-1 | Soil | 8082A |
| 24F0929-03 | BO-5S 0-1 | Soil | 8082A |
| 24F0929-04 | BO-5E 0-1 | Soil | 8082A |
| 24F0929-05 | BO-10N 0-1 | Soil | 8082A |
| 24F0929-06 | BO-5N 0-1 | Soil | 8082A |
| 24F0929-07 | G-1 9-10 | Soil | 6010D |
| 24F0929-08 | E-1 9-10 | Soil | 6010D |
| 24F0929-09 | BO-10E 0-1 | Soil | 8082A |
| 24F0929-10 | GO 0-1 | Soil | 8082A |
| 24F0929-11 | G-5 9-10 | Soil | 6010D |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0929

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**

24F0929-01 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24F0929-02 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24F0929-03 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24F0929-04 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24F0929-05 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24F0929-06 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24F0929-09 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0929

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0929

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24F0929-01 through 24F0929-11**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (x)* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: June 28, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BO-5W 0-1
Date Sampled: 06/21/24 09:30
Percent Solids: 96
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (10.1) | --- | 8082A | --- | 200 | 06/27/24 13:45 | --- | DF42507 |
| Aroclor 1221 | ND (10.1) | --- | 8082A | --- | 200 | 06/27/24 13:45 | --- | DF42507 |
| Aroclor 1232 | ND (10.1) | --- | 8082A | --- | 200 | 06/27/24 13:45 | --- | DF42507 |
| Aroclor 1242 | ND (10.1) | --- | 8082A | --- | 200 | 06/27/24 13:45 | --- | DF42507 |
| Aroclor 1248 | ND (10.1) | --- | 8082A | --- | 200 | 06/27/24 13:45 | --- | DF42507 |
| **Aroclor 1254 [2C]** | **167** (10.1) | --- | 8082A | --- | 200 | 06/27/24 13:45 | --- | DF42507 |
| Aroclor 1260 | ND (10.1) | --- | 8082A | --- | 200 | 06/27/24 13:45 | --- | DF42507 |
| Aroclor 1262 | ND (10.1) | --- | 8082A | --- | 200 | 06/27/24 13:45 | --- | DF42507 |
| Aroclor 1268 | ND (10.1) | --- | 8082A | --- | 200 | 06/27/24 13:45 | --- | DF42507 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *%* | *SD* | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *%* | *SD* | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BO-10W 0-1
Date Sampled: 06/21/24 09:45
Percent Solids: 97
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:05 | --- | DF42507 |
| Aroclor 1221 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:05 | --- | DF42507 |
| Aroclor 1232 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:05 | --- | DF42507 |
| Aroclor 1242 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:05 | --- | DF42507 |
| Aroclor 1248 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:05 | --- | DF42507 |
| **Aroclor 1254 [2C]** | **139** (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:05 | --- | DF42507 |
| Aroclor 1260 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:05 | --- | DF42507 |
| Aroclor 1262 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:05 | --- | DF42507 |
| Aroclor 1268 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:05 | --- | DF42507 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *%* | *SD* | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *%* | *SD* | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BO-5S 0-1
Date Sampled: 06/21/24 10:00
Percent Solids: 97
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:25 | --- | DF42507 |
| Aroclor 1221 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:25 | --- | DF42507 |
| Aroclor 1232 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:25 | --- | DF42507 |
| Aroclor 1242 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:25 | --- | DF42507 |
| Aroclor 1248 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:25 | --- | DF42507 |
| **Aroclor 1254 [2C]** | **180** (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:25 | --- | DF42507 |
| Aroclor 1260 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:25 | --- | DF42507 |
| Aroclor 1262 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:25 | --- | DF42507 |
| Aroclor 1268 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:25 | --- | DF42507 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | % | SD | 30-150 |
| *Surrogate: Tetrachloro-m-xylene* | % | SD | 30-150 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BO-5E 0-1
Date Sampled: 06/21/24 10:05
Percent Solids: 99
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (5.1) | --- | 8082A | --- | 100 | 06/27/24 14:45 | --- | DF42507 |
| Aroclor 1221 | ND (5.1) | --- | 8082A | --- | 100 | 06/27/24 14:45 | --- | DF42507 |
| Aroclor 1232 | ND (5.1) | --- | 8082A | --- | 100 | 06/27/24 14:45 | --- | DF42507 |
| Aroclor 1242 | ND (5.1) | --- | 8082A | --- | 100 | 06/27/24 14:45 | --- | DF42507 |
| Aroclor 1248 | ND (5.1) | --- | 8082A | --- | 100 | 06/27/24 14:45 | --- | DF42507 |
| **Aroclor 1254 [2C]** | **93.7** (5.1) | --- | 8082A | --- | 100 | 06/27/24 14:45 | --- | DF42507 |
| Aroclor 1260 | ND (5.1) | --- | 8082A | --- | 100 | 06/27/24 14:45 | --- | DF42507 |
| Aroclor 1262 | ND (5.1) | --- | 8082A | --- | 100 | 06/27/24 14:45 | --- | DF42507 |
| Aroclor 1268 | ND (5.1) | --- | 8082A | --- | 100 | 06/27/24 14:45 | --- | DF42507 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *%* | *SD* | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *%* | *SD* | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BO-10N 0-1
Date Sampled: 06/21/24 10:20
Percent Solids: 98
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (1.0) | --- | 8082A | --- | 20 | 06/27/24 15:04 | --- | DF42507 |
| Aroclor 1221 | ND (1.0) | --- | 8082A | --- | 20 | 06/27/24 15:04 | --- | DF42507 |
| Aroclor 1232 | ND (1.0) | --- | 8082A | --- | 20 | 06/27/24 15:04 | --- | DF42507 |
| Aroclor 1242 | ND (1.0) | --- | 8082A | --- | 20 | 06/27/24 15:04 | --- | DF42507 |
| Aroclor 1248 | ND (1.0) | --- | 8082A | --- | 20 | 06/27/24 15:04 | --- | DF42507 |
| **Aroclor 1254 [2C]** | **12.8** (1.0) | --- | 8082A | --- | 20 | 06/27/24 15:04 | --- | DF42507 |
| Aroclor 1260 | ND (1.0) | --- | 8082A | --- | 20 | 06/27/24 15:04 | --- | DF42507 |
| Aroclor 1262 | ND (1.0) | --- | 8082A | --- | 20 | 06/27/24 15:04 | --- | DF42507 |
| Aroclor 1268 | ND (1.0) | --- | 8082A | --- | 20 | 06/27/24 15:04 | --- | DF42507 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *%* | *SD* | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *%* | *SD* | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BO-5N 0-1
Date Sampled: 06/21/24 10:30
Percent Solids: 98
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (2.6) | --- | 8082A | --- | 50 | 06/27/24 15:24 | --- | DF42507 |
| Aroclor 1221 | ND (2.6) | --- | 8082A | --- | 50 | 06/27/24 15:24 | --- | DF42507 |
| Aroclor 1232 | ND (2.6) | --- | 8082A | --- | 50 | 06/27/24 15:24 | --- | DF42507 |
| Aroclor 1242 | ND (2.6) | --- | 8082A | --- | 50 | 06/27/24 15:24 | --- | DF42507 |
| Aroclor 1248 | ND (2.6) | --- | 8082A | --- | 50 | 06/27/24 15:24 | --- | DF42507 |
| **Aroclor 1254 [2C]** | **35.3** (2.6) | --- | 8082A | --- | 50 | 06/27/24 15:24 | --- | DF42507 |
| Aroclor 1260 | ND (2.6) | --- | 8082A | --- | 50 | 06/27/24 15:24 | --- | DF42507 |
| Aroclor 1262 | ND (2.6) | --- | 8082A | --- | 50 | 06/27/24 15:24 | --- | DF42507 |
| Aroclor 1268 | ND (2.6) | --- | 8082A | --- | 50 | 06/27/24 15:24 | --- | DF42507 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | % | SD | 30-150 |
| *Surrogate: Tetrachloro-m-xylene* | % | SD | 30-150 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1 9-10
Date Sampled: 06/21/24 10:55
Percent Solids: 93

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-07
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **31.6** (5.25) | --- | 6010D | --- | 1 | KJB | 06/25/24 21:50 | 2.04 100 | DF42508 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 9-10
Date Sampled: 06/21/24 11:00
Percent Solids: 80

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-08
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **413** (6.13) | --- | 6010D | --- | 1 | KJB | 06/25/24 21:52 | 2.04 100 | DF42508 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BO-10E 0-1
Date Sampled: 06/21/24 11:25
Percent Solids: 93
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (270) | --- | 8082A | --- | 5000 | 06/27/24 13:05 | --- | DF42507 |
| Aroclor 1221 | ND (270) | --- | 8082A | --- | 5000 | 06/27/24 13:05 | --- | DF42507 |
| Aroclor 1232 | ND (270) | --- | 8082A | --- | 5000 | 06/27/24 13:05 | --- | DF42507 |
| Aroclor 1242 | ND (270) | --- | 8082A | --- | 5000 | 06/27/24 13:05 | --- | DF42507 |
| Aroclor 1248 | ND (270) | --- | 8082A | --- | 5000 | 06/27/24 13:05 | --- | DF42507 |
| **Aroclor 1254** | **3040** (270) | --- | 8082A | --- | 5000 | 06/27/24 13:05 | --- | DF42507 |
| Aroclor 1260 | ND (270) | --- | 8082A | --- | 5000 | 06/27/24 13:05 | --- | DF42507 |
| Aroclor 1262 | ND (270) | --- | 8082A | --- | 5000 | 06/27/24 13:05 | --- | DF42507 |
| Aroclor 1268 | ND (270) | --- | 8082A | --- | 5000 | 06/27/24 13:05 | --- | DF42507 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *%* | *SD* | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *%* | *SD* | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: GO 0-1
Date Sampled: 06/21/24 11:10
Percent Solids: 97
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 12:46 | --- | DF42507 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 12:46 | --- | DF42507 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 12:46 | --- | DF42507 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 12:46 | --- | DF42507 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 12:46 | --- | DF42507 |
| **Aroclor 1254 [2C]** | **0.4** (0.05) | --- | 8082A | --- | 1 | 06/27/24 12:46 | --- | DF42507 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 12:46 | --- | DF42507 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 12:46 | --- | DF42507 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 12:46 | --- | DF42507 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *66 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5 9-10
Date Sampled: 06/21/24 08:35
Percent Solids: 90

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-11
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **101** (5.15) | --- | 6010D | --- | 1 | KJB | 06/25/24 21:55 | 2.17 100 | DF42508 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0929

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DF42508 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 4.93 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 85.0 | 15.9 | mg/kg wet | 100.0 | | 85 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 89.5 | 15.4 | mg/kg wet | 100.0 | | 89 | 80-120 | 5 | 30 | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DF42507 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0180* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0185* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0201* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 91 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 91 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 96 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0207* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0205* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 90 | 40-140 | 0.5 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 91 | 40-140 | 0.6 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0929

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DF42507 - 3540C** | | | | | | | | | | |
| Aroclor 1260 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 93 | 40-140 | 1 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 95 | 40-140 | 0.9 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0188* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0194* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0207* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0207* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0929

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| SD | Surrogate recovery(ies) diluted below the MRL (SD). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0929

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24F0929
Date Received: 6/24/2024
Project Due Date: 7/1/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.3 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 565158 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 565159 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 565160 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 565161 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 565162 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 565163 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 565164 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 8 | 565165 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 9 | 565166 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 10 | 565167 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 11 | 565168 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials TD
Are barcode labels on correct containers? Yes / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24F0929

Date Received: 6/24/2024

By: [signature] Date & Time: 6/24/24 1552

Reviewed By: [signature] Date & Time: 6/24/24 1817

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24F0929

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Is this project for any of the following?: | O CT RCP ◉ MA MCP O RGP | |
| Reporting Limits | | |
| Electonic Deliverables | ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD | |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | | PCB | Lead | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6-21-24 | 0930 | Grab | Soil | BO-5W | 0-1 | X | | | | | | | | | | | | | | | |
| | | 0945 | Grab | Soil | BO-10W | 0-1 | X | | | | | | | | | | | | | | | |
| | | 1000 | Grab | Soil | BO-5S | 0-1 | X | | | | | | | | | | | | | | | |
| | | 1005 | Grab | Soil | BO-5E | 0-1 | X | | | | | | | | | | | | | | | |
| | | 1020 | Grab | Soil | BO-10N | 0-1 | X | | | | | | | | | | | | | | | |
| | | 1030 | Grab | Soil | BO-5N | 0-1 | X | | | | | | | | | | | | | | | |
| | | 1055 | Grab | Soil | G-1 | 9-10 | | X | | | | | | | | | | | | | | |
| | | 1100 | Grab | Soil | E-1 | 9-10 | | X | | | | | | | | | | | | | | |
| | | 1125 | Grab | Soil | BO-10E | 0-1 | X | | | | | | | | | | | | | | | |
| | ↓ | 1110 | Grab | Soil | GO | 0-1 | X | | | | | | | | | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 |
| | | | | | | | | | | **Number of Containers per Sample:** | | 1 |

**Laboratory Use Only**

Cooler Present: YES O Drop Off
Seals Intact: O Pickup
Cooler Temperature: 4.5 °C Ice

**Sampled by :** DB and NR

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 6-21-24 1350 | Secured Fridge 6-21-24 1350 | 6/24/24 9:40 | 6/24/24 9:40 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| 6/24/24 16:19 | | | |

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24F0929

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Reporting Limits | | |

Is this project for any of the following?: O CT RCP ◉ MA MCP O RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: PCB | Lead | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6-21-24 | 0835 | Grab | Soil | G-5 9-10 | X | X | 1 | | | | | | | | | | | | | | | | |
| | | | Grab | Soil | | X | | | | | | | | | | | | | | | | | | |
| | | | Grab | Soil | | X | | | | | | | | | | | | | | | | | | |
| | | | Grab | Soil | | X | | | | | | | | | | | | | | | | | | |
| | | | Grab | Soil | | X | | | | | | | | | | | | | | | | | | |
| | | | Grab | Soil | | | | | | | | | | | | | | | | | | | | |
| | | | Grab | Soil | | | | | | | | | | | | | | | | | | | | |
| | | | Grab | Soil | | | | | | | | | | | | | | | | | | | | |
| | | | Grab | Soil | | | | | | | | | | | | | | | | | | | | |
| | | | Grab | Soil | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 |
| | | | | | | | | | | **Number of Containers per Sample:** | | 1 |

**Laboratory Use Only**

Cooler Present: Yes O Drop Off
Seals Intact: O Pickup
Cooler Temperature: 4.3 °C / C

**Sampled by :** DB and NR

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 6-21-24 1350 | 6/24/24 5:40 | 6/24/24 16:25 | 6/24/24 1629 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24F0929**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 9:09 pm, Jul 01, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0929

## SAMPLE RECEIPT

The following samples were received on June 24, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Question I: All samples for Metals were analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24F0929-01 | BO-5W 0-1 | Soil | 8082A |
| 24F0929-02 | BO-10W 0-1 | Soil | 8082A |
| 24F0929-03 | BO-5S 0-1 | Soil | 8082A |
| 24F0929-04 | BO-5E 0-1 | Soil | 8082A |
| 24F0929-05 | BO-10N 0-1 | Soil | 8082A |
| 24F0929-06 | BO-5N 0-1 | Soil | 8082A |
| 24F0929-07 | G-1 9-10 | Soil | 6010D |
| 24F0929-08 | E-1 9-10 | Soil | 6010D |
| 24F0929-09 | BO-10E 0-1 | Soil | 8082A |
| 24F0929-10 | GO 0-1 | Soil | 8082A |
| 24F0929-11 | G-5 9-10 | Soil | 6010D |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0929

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**

24F0929-01 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24F0929-02 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24F0929-03 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24F0929-04 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24F0929-05 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24F0929-06 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24F0929-09 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0929

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0929

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24F0929-01 through 24F0929-11**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (x)* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: June 28, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BO-5W 0-1
Date Sampled: 06/21/24 09:30
Percent Solids: 96
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (10.1) | --- | 8082A | --- | 200 | 06/27/24 13:45 | --- | DF42507 |
| Aroclor 1221 | ND (10.1) | --- | 8082A | --- | 200 | 06/27/24 13:45 | --- | DF42507 |
| Aroclor 1232 | ND (10.1) | --- | 8082A | --- | 200 | 06/27/24 13:45 | --- | DF42507 |
| Aroclor 1242 | ND (10.1) | --- | 8082A | --- | 200 | 06/27/24 13:45 | --- | DF42507 |
| Aroclor 1248 | ND (10.1) | --- | 8082A | --- | 200 | 06/27/24 13:45 | --- | DF42507 |
| **Aroclor 1254 [2C]** | **167** (10.1) | --- | 8082A | --- | 200 | 06/27/24 13:45 | --- | DF42507 |
| Aroclor 1260 | ND (10.1) | --- | 8082A | --- | 200 | 06/27/24 13:45 | --- | DF42507 |
| Aroclor 1262 | ND (10.1) | --- | 8082A | --- | 200 | 06/27/24 13:45 | --- | DF42507 |
| Aroclor 1268 | ND (10.1) | --- | 8082A | --- | 200 | 06/27/24 13:45 | --- | DF42507 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *%* | *SD* | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *%* | *SD* | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BO-10W 0-1
Date Sampled: 06/21/24 09:45
Percent Solids: 97
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:05 | --- | DF42507 |
| Aroclor 1221 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:05 | --- | DF42507 |
| Aroclor 1232 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:05 | --- | DF42507 |
| Aroclor 1242 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:05 | --- | DF42507 |
| Aroclor 1248 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:05 | --- | DF42507 |
| **Aroclor 1254 [2C]** | **139** (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:05 | --- | DF42507 |
| Aroclor 1260 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:05 | --- | DF42507 |
| Aroclor 1262 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:05 | --- | DF42507 |
| Aroclor 1268 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:05 | --- | DF42507 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *%* | *SD* | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *%* | *SD* | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BO-5S 0-1
Date Sampled: 06/21/24 10:00
Percent Solids: 97
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:25 | --- | DF42507 |
| Aroclor 1221 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:25 | --- | DF42507 |
| Aroclor 1232 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:25 | --- | DF42507 |
| Aroclor 1242 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:25 | --- | DF42507 |
| Aroclor 1248 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:25 | --- | DF42507 |
| **Aroclor 1254 [2C]** | **180** (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:25 | --- | DF42507 |
| Aroclor 1260 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:25 | --- | DF42507 |
| Aroclor 1262 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:25 | --- | DF42507 |
| Aroclor 1268 | ND (10.2) | --- | 8082A | --- | 200 | 06/27/24 14:25 | --- | DF42507 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | % | SD | 30-150 |
| *Surrogate: Tetrachloro-m-xylene* | % | SD | 30-150 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BO-5E 0-1
Date Sampled: 06/21/24 10:05
Percent Solids: 99
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (5.1) | --- | 8082A | --- | 100 | 06/27/24 14:45 | --- | DF42507 |
| Aroclor 1221 | ND (5.1) | --- | 8082A | --- | 100 | 06/27/24 14:45 | --- | DF42507 |
| Aroclor 1232 | ND (5.1) | --- | 8082A | --- | 100 | 06/27/24 14:45 | --- | DF42507 |
| Aroclor 1242 | ND (5.1) | --- | 8082A | --- | 100 | 06/27/24 14:45 | --- | DF42507 |
| Aroclor 1248 | ND (5.1) | --- | 8082A | --- | 100 | 06/27/24 14:45 | --- | DF42507 |
| **Aroclor 1254 [2C]** | **93.7** (5.1) | --- | 8082A | --- | 100 | 06/27/24 14:45 | --- | DF42507 |
| Aroclor 1260 | ND (5.1) | --- | 8082A | --- | 100 | 06/27/24 14:45 | --- | DF42507 |
| Aroclor 1262 | ND (5.1) | --- | 8082A | --- | 100 | 06/27/24 14:45 | --- | DF42507 |
| Aroclor 1268 | ND (5.1) | --- | 8082A | --- | 100 | 06/27/24 14:45 | --- | DF42507 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *%* | *SD* | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *%* | *SD* | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BO-10N 0-1
Date Sampled: 06/21/24 10:20
Percent Solids: 98
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (1.0) | --- | 8082A | --- | 20 | 06/27/24 15:04 | --- | DF42507 |
| Aroclor 1221 | ND (1.0) | --- | 8082A | --- | 20 | 06/27/24 15:04 | --- | DF42507 |
| Aroclor 1232 | ND (1.0) | --- | 8082A | --- | 20 | 06/27/24 15:04 | --- | DF42507 |
| Aroclor 1242 | ND (1.0) | --- | 8082A | --- | 20 | 06/27/24 15:04 | --- | DF42507 |
| Aroclor 1248 | ND (1.0) | --- | 8082A | --- | 20 | 06/27/24 15:04 | --- | DF42507 |
| **Aroclor 1254 [2C]** | **12.8** (1.0) | --- | 8082A | --- | 20 | 06/27/24 15:04 | --- | DF42507 |
| Aroclor 1260 | ND (1.0) | --- | 8082A | --- | 20 | 06/27/24 15:04 | --- | DF42507 |
| Aroclor 1262 | ND (1.0) | --- | 8082A | --- | 20 | 06/27/24 15:04 | --- | DF42507 |
| Aroclor 1268 | ND (1.0) | --- | 8082A | --- | 20 | 06/27/24 15:04 | --- | DF42507 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *%* | *SD* | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *%* | *SD* | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BO-5N 0-1
Date Sampled: 06/21/24 10:30
Percent Solids: 98
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (2.6) | --- | 8082A | --- | 50 | 06/27/24 15:24 | --- | DF42507 |
| Aroclor 1221 | ND (2.6) | --- | 8082A | --- | 50 | 06/27/24 15:24 | --- | DF42507 |
| Aroclor 1232 | ND (2.6) | --- | 8082A | --- | 50 | 06/27/24 15:24 | --- | DF42507 |
| Aroclor 1242 | ND (2.6) | --- | 8082A | --- | 50 | 06/27/24 15:24 | --- | DF42507 |
| Aroclor 1248 | ND (2.6) | --- | 8082A | --- | 50 | 06/27/24 15:24 | --- | DF42507 |
| **Aroclor 1254 [2C]** | **35.3** (2.6) | --- | 8082A | --- | 50 | 06/27/24 15:24 | --- | DF42507 |
| Aroclor 1260 | ND (2.6) | --- | 8082A | --- | 50 | 06/27/24 15:24 | --- | DF42507 |
| Aroclor 1262 | ND (2.6) | --- | 8082A | --- | 50 | 06/27/24 15:24 | --- | DF42507 |
| Aroclor 1268 | ND (2.6) | --- | 8082A | --- | 50 | 06/27/24 15:24 | --- | DF42507 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | % | SD | 30-150 |
| *Surrogate: Tetrachloro-m-xylene* | % | SD | 30-150 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-1 9-10
Date Sampled: 06/21/24 10:55
Percent Solids: 93

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-07
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **31.6** (5.25) | --- | 6010D | --- | 1 | KJB | 06/25/24 21:50 | 2.04 100 | DF42508 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E-1 9-10
Date Sampled: 06/21/24 11:00
Percent Solids: 80

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-08
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **413** (6.13) | --- | 6010D | --- | 1 | KJB | 06/25/24 21:52 | 2.04 100 | DF42508 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BO-10E 0-1
Date Sampled: 06/21/24 11:25
Percent Solids: 93
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (270) | --- | 8082A | --- | 5000 | 06/27/24 13:05 | --- | DF42507 |
| Aroclor 1221 | ND (270) | --- | 8082A | --- | 5000 | 06/27/24 13:05 | --- | DF42507 |
| Aroclor 1232 | ND (270) | --- | 8082A | --- | 5000 | 06/27/24 13:05 | --- | DF42507 |
| Aroclor 1242 | ND (270) | --- | 8082A | --- | 5000 | 06/27/24 13:05 | --- | DF42507 |
| Aroclor 1248 | ND (270) | --- | 8082A | --- | 5000 | 06/27/24 13:05 | --- | DF42507 |
| **Aroclor 1254** | **3040** (270) | --- | 8082A | --- | 5000 | 06/27/24 13:05 | --- | DF42507 |
| Aroclor 1260 | ND (270) | --- | 8082A | --- | 5000 | 06/27/24 13:05 | --- | DF42507 |
| Aroclor 1262 | ND (270) | --- | 8082A | --- | 5000 | 06/27/24 13:05 | --- | DF42507 |
| Aroclor 1268 | ND (270) | --- | 8082A | --- | 5000 | 06/27/24 13:05 | --- | DF42507 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *%* | *SD* | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *%* | *SD* | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: GO 0-1
Date Sampled: 06/21/24 11:10
Percent Solids: 97
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 6/25/24 10:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 12:46 | --- | DF42507 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 12:46 | --- | DF42507 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 12:46 | --- | DF42507 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 12:46 | --- | DF42507 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 12:46 | --- | DF42507 |
| **Aroclor 1254 [2C]** | **0.4** (0.05) | --- | 8082A | --- | 1 | 06/27/24 12:46 | --- | DF42507 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 12:46 | --- | DF42507 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 12:46 | --- | DF42507 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 06/27/24 12:46 | --- | DF42507 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *66 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-5 9-10
Date Sampled: 06/21/24 08:35
Percent Solids: 90

ESS Laboratory Work Order: 24F0929
ESS Laboratory Sample ID: 24F0929-11
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **101** (5.15) | --- | 6010D | --- | 1 | KJB | 06/25/24 21:55 | 2.17 100 | DF42508 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0929

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DF42508 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 4.93 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 85.0 | 15.9 | mg/kg wet | 100.0 | | 85 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 89.5 | 15.4 | mg/kg wet | 100.0 | | 89 | 80-120 | 5 | 30 | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DF42507 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0180* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0185* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0201* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 91 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 91 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 96 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0192* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0207* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0205* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 90 | 40-140 | 0.5 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 91 | 40-140 | 0.6 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0929

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DF42507 - 3540C** | | | | | | | | | | |
| Aroclor 1260 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 93 | 40-140 | 1 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 95 | 40-140 | 0.9 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0188* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0194* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0207* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0207* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0929

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| SD | Surrogate recovery(ies) diluted below the MRL (SD). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24F0929

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24F0929
Date Received: 6/24/2024
Project Due Date: 7/1/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.3 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 565158 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 565159 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 565160 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 565161 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 565162 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 565163 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 565164 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 8 | 565165 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 9 | 565166 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 10 | 565167 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 11 | 565168 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials TD
Are barcode labels on correct containers? Yes / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24F0929

Date Received: 6/24/2024

By: [signature] Date & Time: 6/24/24 1552

Reviewed By: [signature] Date & Time: 6/24/24 1817

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24F0929

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Is this project for any of the following?: | O CT RCP ◉ MA MCP O RGP | |
| Reporting Limits | | |
| Electonic Deliverables | ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD | |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

Analysis

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | | PCB | Lead | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6-21-24 | 0930 | Grab | Soil | BO-5W | 0-1 | X | | | | | | | | | | | | | | | |
| | | 0945 | Grab | Soil | BO-10W | 0-1 | X | | | | | | | | | | | | | | | |
| | | 1000 | Grab | Soil | BO-5S | 0-1 | X | | | | | | | | | | | | | | | |
| | | 1005 | Grab | Soil | BO-5E | 0-1 | X | | | | | | | | | | | | | | | |
| | | 1020 | Grab | Soil | BO-10N | 0-1 | X | | | | | | | | | | | | | | | |
| | | 1030 | Grab | Soil | BO-5N | 0-1 | X | | | | | | | | | | | | | | | |
| | | 1055 | Grab | Soil | G-1 | 9-10 | | X | | | | | | | | | | | | | | |
| | | 1100 | Grab | Soil | E-1 | 9-10 | | X | | | | | | | | | | | | | | |
| | | 1125 | Grab | Soil | BO-10E | 0-1 | X | | | | | | | | | | | | | | | |
| | ↓ | 1110 | Grab | Soil | GO | 0-1 | X | | | | | | | | | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 |
| | | | | | | | | | | **Number of Containers per Sample:** | | 1 |

**Laboratory Use Only**

Cooler Present: YES O Drop Off
Seals Intact: O Pickup
Cooler Temperature: 4.5 °C Ice

**Sampled by :** DB and NR

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 6-21-24 1350 | Secured Fridge 6-21-24 1350 | 6/24/24 9:40 | 6/24/24 9:40 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| 6/24/24 16:19 | | | |

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24F0929

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Reporting Limits | | |

Is this project for any of the following?: O CT RCP ◉ MA MCP O RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, dbarboza@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: PCB | Lead | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6-21-24 | 0835 | Grab | Soil | G-5 9-10 | X | X | 1 | | | | | | | | | | | | | | | | |
| | | | Grab | Soil | | X | | | | | | | | | | | | | | | | | | |
| | | | Grab | Soil | | X | | | | | | | | | | | | | | | | | | |
| | | | Grab | Soil | | X | | | | | | | | | | | | | | | | | | |
| | | | Grab | Soil | | X | | | | | | | | | | | | | | | | | | |
| | | | Grab | Soil | | | | | | | | | | | | | | | | | | | | |
| | | | Grab | Soil | | | | | | | | | | | | | | | | | | | | |
| | | | Grab | Soil | | | | | | | | | | | | | | | | | | | | |
| | | | Grab | Soil | | | | | | | | | | | | | | | | | | | | |
| | | | Grab | Soil | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 |
| | | | | | | | | | | **Number of Containers per Sample:** | | 1 |

**Laboratory Use Only**

Cooler Present: Yes O Drop Off
Seals Intact: O Pickup
Cooler Temperature: 4.3 °C / C

**Sampled by :** DB and NR

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 6-21-24 1350 | 6/24/24 5:40 | 6/24/24 16:25 | 6/24/24 1629 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 3 (332-344)**
**ESS Laboratory Work Order Number: 24G0130**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 2:38 pm, Jul 11, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

## SAMPLE RECEIPT

The following samples were received on July 02, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Low Level VOA vials were frozen by ESS Laboratory on July 2, 2024 at 18:29.**
**Tetrahydrofuran is reported above the MA CAM reporting limit of 0.010 mg/kg.**

**Question I: All samples for EPH and Metals were analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24G0130-01 | O-0.5 | Soil | 8260D Low |
| 24G0130-02 | O-0.5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0130-03 | K-1 | Soil | 8260D Low |
| 24G0130-04 | K-1 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0130-05 | L-M-1 | Soil | 8260D Low |
| 24G0130-06 | L-M-1 | Soil | 1010A, 1311, 1311/6010D, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0130-07 | K-3 | Soil | 8260D Low |
| 24G0130-08 | K-3 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

| | | | |
|---|---|---|---|
| 24G0130-09 | K-4.5 | Soil | 8260D Low |
| 24G0130-10 | K-4.5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0130-11 | L-M-4.5 | Soil | 8260D Low |
| 24G0130-12 | L-M-4.5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0130-13 | Q-7 | Soil | 8260D Low |
| 24G0130-14 | Q-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0130-15 | S-7 | Soil | 8260D Low |
| 24G0130-16 | S-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0130-17 | U-7 | Soil | 8260D Low |
| 24G0130-18 | U-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0130-19 | W-7 | Soil | 8260D Low |
| 24G0130-20 | W-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

## PROJECT NARRATIVE

**8081B Organochlorine Pesticides**

24G0130-02 **Lower value is used due to matrix interferences (LC).**
Dieldrin [2C]

24G0130-02 **Percent difference between primary and confirmation results exceeds 40% (P).**
Dieldrin [2C]

**8151A Chlorinated Herbicides**

D4G0206-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
Dinoseb [2C] (19% @ 15%)

D4G0206-CCV2 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
Dinoseb [2C] (24% @ 15%)

D4G0206-CCV3 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
Dinoseb [2C] (23% @ 15%)

D4G0206-CCV4 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
Dinoseb [2C] (28% @ 15%)

**Semi-Volatile Organic Compounds**

D4G0090-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (70% @ 40-160%)

D4G0114-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (81% @ 40-160%)

D4G0114-TUN1 **Pentachlorophenol tailing factor > 2.**

DG40304-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
4-Nitrophenol (49% @ 30%)

**Total Metals**

24G0130-02 **Elevated Method Reporting Limits due to sample matrix (EL).**
Arsenic

24G0130-04 **Elevated Method Reporting Limits due to sample matrix (EL).**
Arsenic

24G0130-06 **Elevated Method Reporting Limits due to sample matrix (EL).**
Arsenic

24G0130-08 **Elevated Method Reporting Limits due to sample matrix (EL).**
Arsenic

24G0130-10 **Elevated Method Reporting Limits due to sample matrix (EL).**
Arsenic

24G0130-12 **Elevated Method Reporting Limits due to sample matrix (EL).**
Arsenic

24G0130-14 **Elevated Method Reporting Limits due to sample matrix (EL).**
Arsenic

24G0130-16 **Elevated Method Reporting Limits due to sample matrix (EL).**

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

Arsenic

24G0130-18 **Elevated Method Reporting Limits due to sample matrix (EL).**
Arsenic

24G0130-20 **Elevated Method Reporting Limits due to sample matrix (EL).**
Arsenic

**Volatile Organics Low Level**

D4G0083-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
1,4-Dioxane (39% @ 20%), Diethyl Ether (27% @ 20%), Ethyl tertiary-butyl ether (21% @ 20%), Tertiary-amyl methyl ether (22% @ 20%), Tetrahydrofuran (38% @ 20%)

DG40319-BS1 **Blank Spike recovery is above upper control limit (B+).**
Diethyl Ether (133% @ 70-130%), Isopropylbenzene (131% @ 70-130%), Tertiary-amyl methyl ether (131% @ 70-130%)

DG40319-BSD1 **Blank Spike recovery is above upper control limit (B+).**
1,4-Dioxane (133% @ 70-130%), Diethyl Ether (132% @ 70-130%), Isopropylbenzene (148% @ 70-130%), tert-Butylbenzene (131% @ 70-130%), Tetrahydrofuran (131% @ 70-130%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24G0130-01 through 24G0130-20**

Matrices: ( ) Ground Water/Surface Water (X) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| (X) 8260 VOC CAM II A | ( X) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (X) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| (X) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | (X) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (X) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | (X) MassDEP EPH CAM IV B | (X) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (X) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (X) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (X) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (X) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( X) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (X) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? ***Data User Note:*** ***Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*** | Yes ( ) No (X)* |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (X)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (X)* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: July 11, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: O-0.5
Date Sampled: 07/02/24 09:35
Percent Solids: 91
Initial Volume: 6.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,1,1-Trichloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,1,2,2-Tetrachloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,1,2-Trichloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,1-Dichloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,1-Dichloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,1-Dichloropropene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,2,3-Trichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,2,3-Trichloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,2,4-Trichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,2,4-Trimethylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,2-Dibromoethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,2-Dichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,2-Dichloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,2-Dichloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,3,5-Trimethylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,3-Dichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,3-Dichloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,4-Dichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 1,4-Dioxane | ND (0.0886) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 2,2-Dichloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 2-Butanone | ND (0.0443) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 2-Chlorotoluene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 2-Hexanone | ND (0.0443) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 4-Chlorotoluene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| 4-Isopropyltoluene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: O-0.5
Date Sampled: 07/02/24 09:35
Percent Solids: 91
Initial Volume: 6.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0443) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Acetone | ND (0.0443) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Benzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Bromobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Bromochloromethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Bromodichloromethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Bromoform | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Bromomethane | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Carbon Disulfide | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Carbon Tetrachloride | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Chlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Chloroethane | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Chloroform | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Chloromethane | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| cis-1,2-Dichloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| cis-1,3-Dichloropropene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Dibromochloromethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Dibromomethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Dichlorodifluoromethane | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Diethyl Ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Di-isopropyl ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Ethyl tertiary-butyl ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Ethylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Hexachlorobutadiene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Isopropylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Methyl tert-Butyl Ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Methylene Chloride | ND (0.0222) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: O-0.5
Date Sampled: 07/02/24 09:35
Percent Solids: 91
Initial Volume: 6.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| n-Butylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| n-Propylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| sec-Butylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Styrene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| tert-Butylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Tertiary-amyl methyl ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Tetrachloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Tetrahydrofuran | ND (0.0177) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Toluene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| trans-1,2-Dichloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| trans-1,3-Dichloropropene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Trichloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Trichlorofluoromethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Vinyl Chloride | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Xylene O | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Xylene P,M | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |
| Xylenes (Total) | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:50 | D4G0083 | DG40319 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *111 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *94 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *109 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: O-0.5
Date Sampled: 07/02/24 09:35
Percent Solids: 91

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.59) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:42 | 2.12 100 | DG40517 |
| **Barium** | **15.1** (1.04) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:42 | 2.12 100 | DG40517 |
| Cadmium | ND (0.52) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:42 | 2.12 100 | DG40517 |
| **Chromium** | **8.70** (1.04) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:42 | 2.12 100 | DG40517 |
| **Lead** | **48.3** (5.18) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:42 | 2.12 100 | DG40517 |
| **Mercury** | **0.064** (0.032) | --- | 7471B | --- | 1 | AFV | 07/08/24 16:57 | 0.67 40 | DG40553 |
| Selenium | ND (5.18) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:42 | 2.12 100 | DG40517 |
| Silver | ND (0.52) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:42 | 2.12 100 | DG40517 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: O-0.5
Date Sampled: 07/02/24 09:35
Percent Solids: 91
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/2/24 20:15

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.239** (0.027) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 1,2,4-Trichlorobenzene | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 1,2-Dichlorobenzene | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 1,3-Dichlorobenzene | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 1,4-Dichlorobenzene | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 2,4,5-Trichlorophenol | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 2,4,6-Trichlorophenol | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 2,4-Dichlorophenol | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 2,4-Dimethylphenol | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 2,4-Dinitrophenol | ND (1.10) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 2,4-Dinitrotoluene | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 2,6-Dinitrotoluene | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 2-Chloronaphthalene | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 2-Chlorophenol | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| **2-Methylnaphthalene** | **0.866** (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 2-Methylphenol | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 2-Nitrophenol | ND (0.549) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 3,3′-Dichlorobenzidine | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 3+4-Methylphenol | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 4-Bromophenyl-phenylether | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 4-Chloroaniline | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| 4-Nitrophenol | ND (1.10) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| **Acenaphthene** | **2.09** (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| **Acenaphthylene** | **0.714** (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| Acetophenone | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| Aniline | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| **Anthracene** | **7.84** (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: O-0.5
Date Sampled: 07/02/24 09:35
Percent Solids: 91
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/2/24 20:15

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| **Benzo(a)anthracene** | **15.1** (2.75) | --- | 8270E | --- | 10 | TJ | 07/05/24 19:51 | D4G0090 | DG40242 |
| **Benzo(a)pyrene** | **13.2** (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| **Benzo(b)fluoranthene** | **12.3** (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| **Benzo(g,h,i)perylene** | **7.43** (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| **Benzo(k)fluoranthene** | **9.13** (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| bis(2-Chloroethoxy)methane | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| bis(2-Chloroethyl)ether | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| bis(2-chloroisopropyl)Ether | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| bis(2-Ethylhexyl)phthalate | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| Butylbenzylphthalate | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| **Chrysene** | **13.6** (2.75) | --- | 8270E | --- | 10 | TJ | 07/05/24 19:51 | D4G0090 | DG40242 |
| **Dibenzo(a,h)Anthracene** | **1.89** (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| **Dibenzofuran** | **2.32** (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| Diethylphthalate | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| Dimethylphthalate | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| Di-n-butylphthalate | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| Di-n-octylphthalate | ND (0.549) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| **Fluoranthene** | **32.0** (2.75) | --- | 8270E | --- | 10 | TJ | 07/05/24 19:51 | D4G0090 | DG40242 |
| **Fluorene** | **3.26** (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| Hexachlorobenzene | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| Hexachlorobutadiene | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| Hexachloroethane | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| **Indeno(1,2,3-cd)Pyrene** | **8.47** (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| Isophorone | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| **Naphthalene** | **2.47** (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| Nitrobenzene | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: O-0.5
Date Sampled: 07/02/24 09:35
Percent Solids: 91
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/2/24 20:15

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| Pentachlorophenol | ND (1.10) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| **Phenanthrene** | **26.3** (2.75) | --- | 8270E | --- | 10 | TJ | 07/05/24 19:51 | D4G0090 | DG40242 |
| Phenol | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |
| **Pyrene** | **25.1** (2.75) | --- | 8270E | --- | 10 | TJ | 07/05/24 19:51 | D4G0090 | DG40242 |
| Pyridine | ND (0.275) | --- | 8270E | --- | 1 | TJ | 07/04/24 3:52 | D4G0090 | DG40242 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *77 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *79 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *82 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *71 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *66 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *72 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *82 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *79 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: O-0.5
Date Sampled: 07/02/24 09:35
Percent Solids: 91
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 12:19 | --- | DG40207 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 12:19 | --- | DG40207 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 12:19 | --- | DG40207 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 12:19 | --- | DG40207 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 12:19 | --- | DG40207 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 07/05/24 12:19 | --- | DG40207 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 12:19 | --- | DG40207 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 12:19 | --- | DG40207 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 12:19 | --- | DG40207 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: O-0.5
Date Sampled: 07/02/24 09:35
Percent Solids: 91
Initial Volume: 19.3g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/3/24 10:40

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0028) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| 4,4´-DDE | ND (0.0028) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| **4,4´-DDT** | **0.0231** (0.0028) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| Aldrin | ND (0.0028) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| alpha-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| alpha-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| beta-BHC [2C] | ND (0.0028) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| Chlordane (Total) | ND (0.0228) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| delta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| **Dieldrin [2C]** | **P, LC 0.0029** (0.0028) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| Endosulfan I | ND (0.0028) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| Endosulfan II | ND (0.0028) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| Endosulfan Sulfate | ND (0.0028) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| Endrin | ND (0.0028) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| Endrin Ketone | ND (0.0028) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| gamma-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| Heptachlor | ND (0.0028) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| Heptachlor Epoxide | ND (0.0028) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| Hexachlorobenzene | ND (0.0028) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| Methoxychlor | ND (0.0028) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |
| Toxaphene | ND (0.142) | --- | 8081B | --- | 1 | 07/07/24 17:51 | D4G0134 | DG40303 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *68 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: O-0.5
Date Sampled: 07/02/24 09:35
Percent Solids: 91
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 15:57 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 15:57 | D4G0206 | DG40831 |
| 2,4-D | ND (0.051) | --- | 8151A | --- | 1 | 07/10/24 15:57 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.052) | --- | 8151A | --- | 1 | 07/10/24 15:57 | D4G0206 | DG40831 |
| Dalapon | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 15:57 | D4G0206 | DG40831 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 15:57 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.051) | --- | 8151A | --- | 1 | 07/10/24 15:57 | D4G0206 | DG40831 |
| Dinoseb | ND (0.052) | --- | 8151A | --- | 1 | 07/10/24 15:57 | D4G0206 | DG40831 |
| MCPA | ND (2.53) | --- | 8151A | --- | 1 | 07/10/24 15:57 | D4G0206 | DG40831 |
| MCPP | ND (2.56) | --- | 8151A | --- | 1 | 07/10/24 15:57 | D4G0206 | DG40831 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: O-0.5
Date Sampled: 07/02/24 09:35
Percent Solids: 91
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 9:35

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **72.2** (10.5) | --- | 8100M | --- | 1 | 07/03/24 19:52 | --- | DG40305 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *85 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: O-0.5
Date Sampled: 07/02/24 09:35
Percent Solids: 91

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-02
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 75** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:21 | umhos/cm | DG40348 |
| **Corrosivity (pH)** | **7.91** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40257 |
| **Corrosivity (pH) Sample Temp** | **21.7** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40257 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:14 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-1
Date Sampled: 07/02/24 09:55
Percent Solids: 88
Initial Volume: 6.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,1,1-Trichloroethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,1,2,2-Tetrachloroethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,1,2-Trichloroethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,1-Dichloroethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,1-Dichloroethene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,1-Dichloropropene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,2,3-Trichlorobenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,2,3-Trichloropropane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,2,4-Trichlorobenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,2,4-Trimethylbenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,2-Dibromoethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,2-Dichlorobenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,2-Dichloroethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,2-Dichloropropane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,3,5-Trimethylbenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,3-Dichlorobenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,3-Dichloropropane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,4-Dichlorobenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 1,4-Dioxane | ND (0.0846) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 2,2-Dichloropropane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 2-Butanone | ND (0.0423) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 2-Chlorotoluene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 2-Hexanone | ND (0.0423) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 4-Chlorotoluene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| 4-Isopropyltoluene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-1
Date Sampled: 07/02/24 09:55
Percent Solids: 88
Initial Volume: 6.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0423) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Acetone | ND (0.0423) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Benzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Bromobenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Bromochloromethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Bromodichloromethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Bromoform | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Bromomethane | ND (0.0085) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Carbon Disulfide | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Carbon Tetrachloride | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Chlorobenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Chloroethane | ND (0.0085) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Chloroform | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Chloromethane | ND (0.0085) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| cis-1,2-Dichloroethene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| cis-1,3-Dichloropropene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Dibromochloromethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Dibromomethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Dichlorodifluoromethane | ND (0.0085) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Diethyl Ether | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Di-isopropyl ether | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Ethyl tertiary-butyl ether | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Ethylbenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Hexachlorobutadiene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Isopropylbenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Methyl tert-Butyl Ether | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Methylene Chloride | ND (0.0212) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-1
Date Sampled: 07/02/24 09:55
Percent Solids: 88
Initial Volume: 6.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| n-Butylbenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| n-Propylbenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| sec-Butylbenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Styrene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| tert-Butylbenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Tertiary-amyl methyl ether | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Tetrachloroethene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Tetrahydrofuran | ND (0.0169) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Toluene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| trans-1,2-Dichloroethene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| trans-1,3-Dichloropropene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Trichloroethene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Trichlorofluoromethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Vinyl Chloride | ND (0.0085) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Xylene O | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Xylene P,M | ND (0.0085) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |
| Xylenes (Total) | ND (0.0085) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:15 | D4G0083 | DG40319 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *112 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *94 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *108 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-1
Date Sampled: 07/02/24 09:55
Percent Solids: 88

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.38) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:49 | 2.38 100 | DG40517 |
| **Barium** | **77.3** (0.95) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:49 | 2.38 100 | DG40517 |
| Cadmium | ND (0.48) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:49 | 2.38 100 | DG40517 |
| **Chromium** | **10.3** (0.95) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:49 | 2.38 100 | DG40517 |
| **Lead** | **167** (4.77) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:49 | 2.38 100 | DG40517 |
| **Mercury** | **0.061** (0.035) | --- | 7471B | --- | 1 | AFV | 07/08/24 16:59 | 0.65 40 | DG40553 |
| Selenium | ND (4.77) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:49 | 2.38 100 | DG40517 |
| Silver | ND (0.48) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:49 | 2.38 100 | DG40517 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-1
Date Sampled: 07/02/24 09:55
Percent Solids: 88

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-04
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.30** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 07/10/24 12:34 | 50 50 | DG41018 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-1
Date Sampled: 07/02/24 09:55
Percent Solids: 88
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/2/24 20:15

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 1,2,4-Trichlorobenzene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 1,2-Dichlorobenzene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 1,3-Dichlorobenzene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 1,4-Dichlorobenzene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 2,4,5-Trichlorophenol | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 2,4,6-Trichlorophenol | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 2,4-Dichlorophenol | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 2,4-Dimethylphenol | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 2,4-Dinitrophenol | ND (1.14) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 2,4-Dinitrotoluene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 2,6-Dinitrotoluene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 2-Chloronaphthalene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 2-Chlorophenol | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 2-Methylnaphthalene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 2-Methylphenol | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 2-Nitrophenol | ND (0.570) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 3,3´-Dichlorobenzidine | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 3+4-Methylphenol | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 4-Bromophenyl-phenylether | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 4-Chloroaniline | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| 4-Nitrophenol | ND (1.14) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Acenaphthene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Acenaphthylene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Acetophenone | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Aniline | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Anthracene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-1
Date Sampled: 07/02/24 09:55
Percent Solids: 88
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/2/24 20:15

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| **Benzo(a)anthracene** | **0.330** (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| **Benzo(a)pyrene** | **0.390** (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| **Benzo(b)fluoranthene** | **0.332** (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Benzo(g,h,i)perylene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Benzo(k)fluoranthene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| bis(2-Chloroethoxy)methane | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| bis(2-Chloroethyl)ether | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| bis(2-chloroisopropyl)Ether | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| bis(2-Ethylhexyl)phthalate | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Butylbenzylphthalate | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| **Chrysene** | **0.329** (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Dibenzo(a,h)Anthracene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Dibenzofuran | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Diethylphthalate | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Dimethylphthalate | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Di-n-butylphthalate | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Di-n-octylphthalate | ND (0.570) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| **Fluoranthene** | **0.477** (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Fluorene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Hexachlorobenzene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Hexachlorobutadiene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Hexachloroethane | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Indeno(1,2,3-cd)Pyrene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Isophorone | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Naphthalene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Nitrobenzene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-1
Date Sampled: 07/02/24 09:55
Percent Solids: 88
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/2/24 20:15

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Pentachlorophenol | ND (1.14) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Phenanthrene | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Phenol | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| **Pyrene** | **0.442** (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |
| Pyridine | ND (0.285) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:22 | D4G0090 | DG40242 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *98 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *98 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *95 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *82 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *84 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *84 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *90 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *90 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-1
Date Sampled: 07/02/24 09:55
Percent Solids: 88
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 12:39 | --- | DG40207 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 12:39 | --- | DG40207 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 12:39 | --- | DG40207 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 12:39 | --- | DG40207 |
| **Aroclor 1248** | **0.08** (0.06) | --- | 8082A | --- | 1 | 07/05/24 12:39 | --- | DG40207 |
| **Aroclor 1254** | **0.2** (0.06) | --- | 8082A | --- | 1 | 07/05/24 12:39 | --- | DG40207 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 12:39 | --- | DG40207 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 12:39 | --- | DG40207 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 12:39 | --- | DG40207 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-1
Date Sampled: 07/02/24 09:55
Percent Solids: 88
Initial Volume: 19.7g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/3/24 10:40

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0029) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| 4,4´-DDE | ND (0.0029) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| **4,4´-DDT** | **0.0081** (0.0029) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| Aldrin | ND (0.0029) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| alpha-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| alpha-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| beta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| Chlordane (Total) | ND (0.0230) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| delta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| Dieldrin | ND (0.0029) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| Endosulfan I | ND (0.0029) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| Endosulfan II | ND (0.0029) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| Endosulfan Sulfate | ND (0.0029) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| Endrin | ND (0.0029) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| Endrin Ketone | ND (0.0029) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| gamma-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| Heptachlor | ND (0.0029) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| Heptachlor Epoxide | ND (0.0029) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| Hexachlorobenzene | ND (0.0029) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| Methoxychlor | ND (0.0029) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |
| Toxaphene | ND (0.144) | --- | 8081B | --- | 1 | 07/07/24 18:19 | D4G0134 | DG40303 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *62 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *61 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-1
Date Sampled: 07/02/24 09:55
Percent Solids: 88
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.011) | --- | 8151A | --- | 1 | 07/10/24 16:24 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.011) | --- | 8151A | --- | 1 | 07/10/24 16:24 | D4G0206 | DG40831 |
| 2,4-D | ND (0.052) | --- | 8151A | --- | 1 | 07/10/24 16:24 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.053) | --- | 8151A | --- | 1 | 07/10/24 16:24 | D4G0206 | DG40831 |
| Dalapon | ND (0.051) | --- | 8151A | --- | 1 | 07/10/24 16:24 | D4G0206 | DG40831 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 16:24 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.052) | --- | 8151A | --- | 1 | 07/10/24 16:24 | D4G0206 | DG40831 |
| Dinoseb | ND (0.053) | --- | 8151A | --- | 1 | 07/10/24 16:24 | D4G0206 | DG40831 |
| MCPA | ND (2.59) | --- | 8151A | --- | 1 | 07/10/24 16:24 | D4G0206 | DG40831 |
| MCPP | ND (2.61) | --- | 8151A | --- | 1 | 07/10/24 16:24 | D4G0206 | DG40831 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-1
Date Sampled: 07/02/24 09:55
Percent Solids: 88
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 9:35

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **55.7** (11.1) | --- | 8100M | --- | 1 | 07/03/24 20:25 | --- | DG40305 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *84 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-1
Date Sampled: 07/02/24 09:55
Percent Solids: 88

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-04
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 336** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:21 | umhos/cm | DG40348 |
| **Corrosivity (pH)** | **8.35** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40257 |
| **Corrosivity (pH) Sample Temp** | **21.7** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40257 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:14 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-1
Date Sampled: 07/02/24 09:55
Percent Solids: 88
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-04
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 7/9/24 16:05

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **20.4** (N/A) | --- | 1311 | --- | 1 | RAP | 07/10/24 8:05 | --- | DG40920 |
| **Temperature (Max C)** | **21.9** (N/A) | --- | 1311 | --- | 1 | RAP | 07/10/24 8:05 | --- | DG40920 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-1
Date Sampled: 07/02/24 10:30
Percent Solids: 93
Initial Volume: 6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/2/24 10:30

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,1,1-Trichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,1,2,2-Tetrachloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,1,2-Trichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,1-Dichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,1-Dichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,1-Dichloropropene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,2,3-Trichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,2,3-Trichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,2,4-Trichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,2,4-Trimethylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,2-Dibromoethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,2-Dichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,2-Dichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,2-Dichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,3,5-Trimethylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,3-Dichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,3-Dichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,4-Dichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 1,4-Dioxane | ND (0.0900) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 2,2-Dichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 2-Butanone | ND (0.0450) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 2-Chlorotoluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 2-Hexanone | ND (0.0450) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 4-Chlorotoluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| 4-Isopropyltoluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-1
Date Sampled: 07/02/24 10:30
Percent Solids: 93
Initial Volume: 6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/2/24 10:30

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0450) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Acetone | ND (0.0450) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Benzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Bromobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Bromochloromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Bromodichloromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Bromoform | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Bromomethane | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Carbon Disulfide | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Carbon Tetrachloride | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Chlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Chloroethane | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Chloroform | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Chloromethane | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| cis-1,2-Dichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| cis-1,3-Dichloropropene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Dibromochloromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Dibromomethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Dichlorodifluoromethane | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Diethyl Ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Di-isopropyl ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Ethyl tertiary-butyl ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Ethylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Hexachlorobutadiene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Isopropylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Methyl tert-Butyl Ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Methylene Chloride | ND (0.0225) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-1
Date Sampled: 07/02/24 10:30
Percent Solids: 93
Initial Volume: 6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/2/24 10:30

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| n-Butylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| n-Propylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| sec-Butylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Styrene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| tert-Butylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Tertiary-amyl methyl ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Tetrachloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Tetrahydrofuran | ND (0.0180) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Toluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| trans-1,2-Dichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| trans-1,3-Dichloropropene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Trichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Trichlorofluoromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Vinyl Chloride | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Xylene O | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Xylene P,M | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |
| Xylenes (Total) | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:41 | D4G0083 | DG40319 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *111 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *94 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *107 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *100 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-1
Date Sampled: 07/02/24 10:30
Percent Solids: 93

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-06
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.18) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:51 | 2.48 100 | DG40517 |
| **Barium** | **104** (0.87) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:51 | 2.48 100 | DG40517 |
| Cadmium | ND (0.44) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:51 | 2.48 100 | DG40517 |
| **Chromium** | **10.5** (0.87) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:51 | 2.48 100 | DG40517 |
| **Lead** | **455** (4.36) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:51 | 2.48 100 | DG40517 |
| **Mercury** | **0.067** (0.031) | --- | 7471B | --- | 1 | AFV | 07/08/24 17:06 | 0.69 40 | DG40553 |
| Selenium | ND (4.36) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:51 | 2.48 100 | DG40517 |
| Silver | ND (0.44) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:51 | 2.48 100 | DG40517 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-1
Date Sampled: 07/02/24 10:30
Percent Solids: 93

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-06
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

## 1311 TCLP Metals

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **0.70** (0.05) | --- | 1311/6010D | 5 | 1 | KJB | 07/10/24 12:36 | 50 50 | DG41018 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-1
Date Sampled: 07/02/24 10:30
Percent Solids: 93
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/2/24 20:15

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 1,2,4-Trichlorobenzene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 1,2-Dichlorobenzene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 1,3-Dichlorobenzene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 1,4-Dichlorobenzene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 2,4,5-Trichlorophenol | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 2,4,6-Trichlorophenol | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 2,4-Dichlorophenol | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 2,4-Dimethylphenol | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 2,4-Dinitrophenol | ND (1.10) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 2,4-Dinitrotoluene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 2,6-Dinitrotoluene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 2-Chloronaphthalene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 2-Chlorophenol | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 2-Methylnaphthalene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 2-Methylphenol | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 2-Nitrophenol | ND (0.551) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 3,3´-Dichlorobenzidine | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 3+4-Methylphenol | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 4-Bromophenyl-phenylether | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 4-Chloroaniline | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| 4-Nitrophenol | ND (1.10) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Acenaphthene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Acenaphthylene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Acetophenone | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Aniline | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Anthracene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-1
Date Sampled: 07/02/24 10:30
Percent Solids: 93
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/2/24 20:15

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| **Benzo(a)anthracene** | **0.365** (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| **Benzo(a)pyrene** | **0.431** (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| **Benzo(b)fluoranthene** | **0.345** (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| **Benzo(g,h,i)perylene** | **0.369** (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| **Benzo(k)fluoranthene** | **0.354** (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| bis(2-Chloroethoxy)methane | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| bis(2-Chloroethyl)ether | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| bis(2-chloroisopropyl)Ether | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| bis(2-Ethylhexyl)phthalate | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Butylbenzylphthalate | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| **Chrysene** | **0.380** (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Dibenzo(a,h)Anthracene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Dibenzofuran | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Diethylphthalate | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Dimethylphthalate | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Di-n-butylphthalate | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Di-n-octylphthalate | ND (0.551) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| **Fluoranthene** | **0.620** (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Fluorene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Hexachlorobenzene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Hexachlorobutadiene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Hexachloroethane | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| **Indeno(1,2,3-cd)Pyrene** | **0.332** (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Isophorone | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Naphthalene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Nitrobenzene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-1
Date Sampled: 07/02/24 10:30
Percent Solids: 93
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/2/24 20:15

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Pentachlorophenol | ND (1.10) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Phenanthrene | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Phenol | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| **Pyrene** | **0.588** (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |
| Pyridine | ND (0.276) | --- | 8270E | --- | 1 | TJ | 07/04/24 4:53 | D4G0090 | DG40242 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *90 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *91 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *88 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *79 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *78 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *75 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *87 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *89 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-1
Date Sampled: 07/02/24 10:30
Percent Solids: 93
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 12:59 | --- | DG40207 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 12:59 | --- | DG40207 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 12:59 | --- | DG40207 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 12:59 | --- | DG40207 |
| Aroclor 1248 [2C] | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 12:59 | --- | DG40207 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 07/05/24 12:59 | --- | DG40207 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 12:59 | --- | DG40207 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 12:59 | --- | DG40207 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 12:59 | --- | DG40207 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *90 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *91 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-1
Date Sampled: 07/02/24 10:30
Percent Solids: 93
Initial Volume: 19.7g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/3/24 10:40

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| **4,4´-DDT** | **0.0093** (0.0027) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| Chlordane (Total) | ND (0.0219) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |
| Toxaphene | ND (0.137) | --- | 8081B | --- | 1 | 07/07/24 18:47 | D4G0134 | DG40303 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-1
Date Sampled: 07/02/24 10:30
Percent Solids: 93
Initial Volume: 10.4g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 16:50 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 16:50 | D4G0206 | DG40831 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 16:50 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 16:50 | D4G0206 | DG40831 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 07/10/24 16:50 | D4G0206 | DG40831 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 16:50 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 16:50 | D4G0206 | DG40831 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 16:50 | D4G0206 | DG40831 |
| MCPA | ND (2.42) | --- | 8151A | --- | 1 | 07/10/24 16:50 | D4G0206 | DG40831 |
| MCPP | ND (2.44) | --- | 8151A | --- | 1 | 07/10/24 16:50 | D4G0206 | DG40831 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-1
Date Sampled: 07/02/24 10:30
Percent Solids: 93
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 9:35

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **29.8** (10.9) | --- | 8100M | --- | 1 | 07/03/24 20:57 | --- | DG40305 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *89 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-1
Date Sampled: 07/02/24 10:30
Percent Solids: 93

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-06
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 273** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:21 | umhos/cm | DG40348 |
| **Corrosivity (pH)** | **8.41** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40257 |
| **Corrosivity (pH) Sample Temp** | **21.9** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40257 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:14 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-1
Date Sampled: 07/02/24 10:30
Percent Solids: 93
Initial Volume: 100g
Final Volume: 2000ml
Extraction Method: 1311

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-06
Sample Matrix: Soil
Units: °C
Analyst: RAP
Prepared: 7/9/24 16:05

## TCLP Extraction by 1311

| Analyte | Results (MRL) | MDL | Method | TCLP Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Temperature (Min C)** | **20.4** (N/A) | --- | 1311 | --- | 1 | RAP | 07/10/24 8:05 | --- | DG40920 |
| **Temperature (Max C)** | **21.9** (N/A) | --- | 1311 | --- | 1 | RAP | 07/10/24 8:05 | --- | DG40920 |
| **Temperature (Range)** | **Temperature is not within 23 +/-2 °C.** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-3
Date Sampled: 07/02/24 10:45
Percent Solids: 95
Initial Volume: 6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,1,1-Trichloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,1,2,2-Tetrachloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,1,2-Trichloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,1-Dichloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,1-Dichloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,1-Dichloropropene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,2,3-Trichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,2,3-Trichloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,2,4-Trichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,2,4-Trimethylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,2-Dibromoethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,2-Dichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,2-Dichloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,2-Dichloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,3,5-Trimethylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,3-Dichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,3-Dichloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,4-Dichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 1,4-Dioxane | ND (0.0882) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 2,2-Dichloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 2-Butanone | ND (0.0441) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 2-Chlorotoluene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 2-Hexanone | ND (0.0441) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 4-Chlorotoluene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| 4-Isopropyltoluene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-3
Date Sampled: 07/02/24 10:45
Percent Solids: 95
Initial Volume: 6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0441) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Acetone | ND (0.0441) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Benzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Bromobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Bromochloromethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Bromodichloromethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Bromoform | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Bromomethane | ND (0.0088) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Carbon Disulfide | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Carbon Tetrachloride | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Chlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Chloroethane | ND (0.0088) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Chloroform | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Chloromethane | ND (0.0088) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| cis-1,2-Dichloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| cis-1,3-Dichloropropene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Dibromochloromethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Dibromomethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Dichlorodifluoromethane | ND (0.0088) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Diethyl Ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Di-isopropyl ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Ethyl tertiary-butyl ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Ethylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Hexachlorobutadiene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Isopropylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Methyl tert-Butyl Ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Methylene Chloride | ND (0.0220) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-3
Date Sampled: 07/02/24 10:45
Percent Solids: 95
Initial Volume: 6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| n-Butylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| n-Propylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| sec-Butylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Styrene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| tert-Butylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Tertiary-amyl methyl ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Tetrachloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Tetrahydrofuran | ND (0.0176) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Toluene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| trans-1,2-Dichloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| trans-1,3-Dichloropropene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Trichloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Trichlorofluoromethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Vinyl Chloride | ND (0.0088) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Xylene O | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Xylene P,M | ND (0.0088) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |
| Xylenes (Total) | ND (0.0088) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:06 | D4G0083 | DG40319 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *112 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *95 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *108 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *100 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-3
Date Sampled: 07/02/24 10:45
Percent Solids: 95

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-08
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.59) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:53 | 2.04 100 | DG40517 |
| **Barium** | **28.4** (1.04) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:53 | 2.04 100 | DG40517 |
| Cadmium | ND (0.52) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:53 | 2.04 100 | DG40517 |
| **Chromium** | **9.71** (1.04) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:53 | 2.04 100 | DG40517 |
| **Lead** | **55.1** (5.19) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:53 | 2.04 100 | DG40517 |
| **Mercury** | **0.067** (0.028) | --- | 7471B | --- | 1 | AFV | 07/08/24 17:08 | 0.76 40 | DG40553 |
| Selenium | ND (5.19) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:53 | 2.04 100 | DG40517 |
| Silver | ND (0.52) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:53 | 2.04 100 | DG40517 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-3
Date Sampled: 07/02/24 10:45
Percent Solids: 95
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/2/24 20:15

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 1,2,4-Trichlorobenzene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 1,2-Dichlorobenzene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 1,3-Dichlorobenzene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 1,4-Dichlorobenzene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 2,4,5-Trichlorophenol | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 2,4,6-Trichlorophenol | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 2,4-Dichlorophenol | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 2,4-Dimethylphenol | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 2,4-Dinitrophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 2,4-Dinitrotoluene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 2,6-Dinitrotoluene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 2-Chloronaphthalene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 2-Chlorophenol | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 2-Methylnaphthalene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 2-Methylphenol | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 2-Nitrophenol | ND (0.532) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 3,3´-Dichlorobenzidine | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 3+4-Methylphenol | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 4-Bromophenyl-phenylether | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 4-Chloroaniline | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| 4-Nitrophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Acenaphthene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Acenaphthylene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Acetophenone | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Aniline | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Anthracene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-3
Date Sampled: 07/02/24 10:45
Percent Solids: 95
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/2/24 20:15

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Benzo(a)anthracene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Benzo(a)pyrene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Benzo(b)fluoranthene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Benzo(g,h,i)perylene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Benzo(k)fluoranthene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| bis(2-Chloroethoxy)methane | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| bis(2-Chloroethyl)ether | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| bis(2-chloroisopropyl)Ether | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| bis(2-Ethylhexyl)phthalate | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Butylbenzylphthalate | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Chrysene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Dibenzo(a,h)Anthracene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Dibenzofuran | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Diethylphthalate | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Dimethylphthalate | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Di-n-butylphthalate | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Di-n-octylphthalate | ND (0.532) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Fluoranthene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Fluorene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Hexachlorobenzene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Hexachlorobutadiene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Hexachloroethane | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Indeno(1,2,3-cd)Pyrene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Isophorone | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Naphthalene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Nitrobenzene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-3
Date Sampled: 07/02/24 10:45
Percent Solids: 95
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/2/24 20:15

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Pentachlorophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Phenanthrene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Phenol | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Pyrene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |
| Pyridine | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:23 | D4G0114 | DG40242 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *89 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *96 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *86 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *79 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *78 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *84 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *84 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *81 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-3
Date Sampled: 07/02/24 10:45
Percent Solids: 95
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:18 | --- | DG40207 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:18 | --- | DG40207 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:18 | --- | DG40207 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:18 | --- | DG40207 |
| **Aroclor 1248** | **0.1** (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:18 | --- | DG40207 |
| **Aroclor 1254** | **0.1** (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:18 | --- | DG40207 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:18 | --- | DG40207 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:18 | --- | DG40207 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:18 | --- | DG40207 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *90 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *85 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-3
Date Sampled: 07/02/24 10:45
Percent Solids: 95
Initial Volume: 20.4g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/3/24 10:40

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| 4,4´-DDE | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| **4,4´-DDT** | **0.0074** (0.0026) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| Aldrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| alpha-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| alpha-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| beta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| Chlordane (Total) | ND (0.0207) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| delta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| Dieldrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| Endosulfan I | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| Endosulfan II | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| Endosulfan Sulfate | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| Endrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| Endrin Ketone | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| gamma-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| Heptachlor | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| Heptachlor Epoxide | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| Hexachlorobenzene | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| Methoxychlor | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |
| Toxaphene | ND (0.130) | --- | 8081B | --- | 1 | 07/07/24 19:14 | D4G0134 | DG40303 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *71 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-3
Date Sampled: 07/02/24 10:45
Percent Solids: 95
Initial Volume: 10.4g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 17:17 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 17:17 | D4G0206 | DG40831 |
| 2,4-D | ND (0.048) | --- | 8151A | --- | 1 | 07/10/24 17:17 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.048) | --- | 8151A | --- | 1 | 07/10/24 17:17 | D4G0206 | DG40831 |
| Dalapon | ND (0.046) | --- | 8151A | --- | 1 | 07/10/24 17:17 | D4G0206 | DG40831 |
| Dicamba [2C] | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 17:17 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.048) | --- | 8151A | --- | 1 | 07/10/24 17:17 | D4G0206 | DG40831 |
| Dinoseb | ND (0.048) | --- | 8151A | --- | 1 | 07/10/24 17:17 | D4G0206 | DG40831 |
| MCPA | ND (2.37) | --- | 8151A | --- | 1 | 07/10/24 17:17 | D4G0206 | DG40831 |
| MCPP | ND (2.39) | --- | 8151A | --- | 1 | 07/10/24 17:17 | D4G0206 | DG40831 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *62 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-3
Date Sampled: 07/02/24 10:45
Percent Solids: 95
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 9:35

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **64.5** (10.1) | --- | 8100M | --- | 1 | 07/03/24 21:29 | --- | DG40305 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *88 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-3
Date Sampled: 07/02/24 10:45
Percent Solids: 95

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-08
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 482** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:21 | umhos/cm | DG40348 |
| **Corrosivity (pH)** | **8.50** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40257 |
| **Corrosivity (pH) Sample Temp** | **21.9** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40257 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:22 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-4.5
Date Sampled: 07/02/24 11:10
Percent Solids: 94
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,1,1-Trichloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,1,2,2-Tetrachloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,1,2-Trichloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,1-Dichloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,1-Dichloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,1-Dichloropropene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,2,3-Trichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,2,3-Trichloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,2,4-Trichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,2,4-Trimethylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,2-Dibromoethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,2-Dichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,2-Dichloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,2-Dichloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,3,5-Trimethylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,3-Dichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,3-Dichloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,4-Dichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 1,4-Dioxane | ND (0.0933) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 2,2-Dichloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 2-Butanone | ND (0.0467) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 2-Chlorotoluene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 2-Hexanone | ND (0.0467) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 4-Chlorotoluene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| 4-Isopropyltoluene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-4.5
Date Sampled: 07/02/24 11:10
Percent Solids: 94
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0467) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Acetone | ND (0.0467) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Benzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Bromobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Bromochloromethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Bromodichloromethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Bromoform | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Bromomethane | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Carbon Disulfide | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Carbon Tetrachloride | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Chlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Chloroethane | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Chloroform | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Chloromethane | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| cis-1,2-Dichloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| cis-1,3-Dichloropropene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Dibromochloromethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Dibromomethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Dichlorodifluoromethane | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Diethyl Ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Di-isopropyl ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Ethyl tertiary-butyl ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Ethylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Hexachlorobutadiene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Isopropylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Methyl tert-Butyl Ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Methylene Chloride | ND (0.0233) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-4.5
Date Sampled: 07/02/24 11:10
Percent Solids: 94
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| n-Butylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| n-Propylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| sec-Butylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Styrene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| tert-Butylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Tertiary-amyl methyl ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Tetrachloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Tetrahydrofuran | ND (0.0187) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Toluene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| trans-1,2-Dichloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| trans-1,3-Dichloropropene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Trichloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Trichlorofluoromethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Vinyl Chloride | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Xylene O | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Xylene P,M | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |
| Xylenes (Total) | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:31 | D4G0083 | DG40319 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *112 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *91 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *108 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-4.5
Date Sampled: 07/02/24 11:10
Percent Solids: 94

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-10
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.51) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:55 | 2.12 100 | DG40517 |
| **Barium** | **32.9** (1.00) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:55 | 2.12 100 | DG40517 |
| Cadmium | ND (0.50) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:55 | 2.12 100 | DG40517 |
| **Chromium** | **10.2** (1.00) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:55 | 2.12 100 | DG40517 |
| **Lead** | **53.2** (5.02) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:55 | 2.12 100 | DG40517 |
| **Mercury** | **0.060** (0.032) | --- | 7471B | --- | 1 | AFV | 07/08/24 17:10 | 0.66 40 | DG40553 |
| Selenium | ND (5.02) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:55 | 2.12 100 | DG40517 |
| Silver | ND (0.50) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:55 | 2.12 100 | DG40517 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-4.5
Date Sampled: 07/02/24 11:10
Percent Solids: 94
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 1,2,4-Trichlorobenzene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 1,2-Dichlorobenzene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 1,3-Dichlorobenzene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 1,4-Dichlorobenzene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 2,4,5-Trichlorophenol | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 2,4,6-Trichlorophenol | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 2,4-Dichlorophenol | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 2,4-Dimethylphenol | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 2,4-Dinitrophenol | ND (1.05) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 2,4-Dinitrotoluene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 2,6-Dinitrotoluene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 2-Chloronaphthalene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 2-Chlorophenol | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 2-Methylnaphthalene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 2-Methylphenol | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 2-Nitrophenol | ND (0.527) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 3,3´-Dichlorobenzidine | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 3+4-Methylphenol | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 4-Bromophenyl-phenylether | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 4-Chloroaniline | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| 4-Nitrophenol | ND (1.05) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Acenaphthene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Acenaphthylene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Acetophenone | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Aniline | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Anthracene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-4.5
Date Sampled: 07/02/24 11:10
Percent Solids: 94
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Benzo(a)anthracene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Benzo(a)pyrene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Benzo(b)fluoranthene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Benzo(g,h,i)perylene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Benzo(k)fluoranthene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| bis(2-Chloroethoxy)methane | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| bis(2-Chloroethyl)ether | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| bis(2-chloroisopropyl)Ether | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| bis(2-Ethylhexyl)phthalate | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Butylbenzylphthalate | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Chrysene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Dibenzo(a,h)Anthracene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Dibenzofuran | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Diethylphthalate | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Dimethylphthalate | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Di-n-butylphthalate | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Di-n-octylphthalate | ND (0.527) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| **Fluoranthene** | **0.293** (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Fluorene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Hexachlorobenzene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Hexachlorobutadiene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Hexachloroethane | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Indeno(1,2,3-cd)Pyrene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Isophorone | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Naphthalene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Nitrobenzene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-4.5
Date Sampled: 07/02/24 11:10
Percent Solids: 94
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Pentachlorophenol | ND (1.05) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Phenanthrene | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Phenol | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| **Pyrene** | **0.276** (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |
| Pyridine | ND (0.263) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:54 | D4G0114 | DG40304 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *86 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *81 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *82 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *77 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *70 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *65 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *86 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *77 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-4.5
Date Sampled: 07/02/24 11:10
Percent Solids: 94
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:38 | --- | DG40207 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:38 | --- | DG40207 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:38 | --- | DG40207 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:38 | --- | DG40207 |
| **Aroclor 1248** | **0.07** (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:38 | --- | DG40207 |
| **Aroclor 1254** | **0.2** (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:38 | --- | DG40207 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:38 | --- | DG40207 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:38 | --- | DG40207 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:38 | --- | DG40207 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *90 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *91 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-4.5
Date Sampled: 07/02/24 11:10
Percent Solids: 94
Initial Volume: 20.9g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/3/24 10:40

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| 4,4´-DDE | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| **4,4´-DDT [2C]** | **0.0081** (0.0025) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| Aldrin | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| alpha-BHC | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| alpha-Chlordane | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| beta-BHC | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| Chlordane (Total) | ND (0.0204) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| delta-BHC | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| Dieldrin | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| Endosulfan I | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| Endosulfan II | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| Endosulfan Sulfate | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| Endrin | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| Endrin Ketone | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| gamma-BHC (Lindane) | ND (0.0015) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| gamma-Chlordane | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| Heptachlor | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| Heptachlor Epoxide | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| Hexachlorobenzene | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| Methoxychlor | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |
| Toxaphene | ND (0.127) | --- | 8081B | --- | 1 | 07/07/24 19:42 | D4G0134 | DG40303 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *69 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-4.5
Date Sampled: 07/02/24 11:10
Percent Solids: 94
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 17:44 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 17:44 | D4G0206 | DG40831 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 17:44 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 17:44 | D4G0206 | DG40831 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 07/10/24 17:44 | D4G0206 | DG40831 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 17:44 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 17:44 | D4G0206 | DG40831 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 17:44 | D4G0206 | DG40831 |
| MCPA | ND (2.40) | --- | 8151A | --- | 1 | 07/10/24 17:44 | D4G0206 | DG40831 |
| MCPP | ND (2.43) | --- | 8151A | --- | 1 | 07/10/24 17:44 | D4G0206 | DG40831 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *70 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-4.5
Date Sampled: 07/02/24 11:10
Percent Solids: 94
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 9:35

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **45.9** (10.4) | --- | 8100M | --- | 1 | 07/03/24 22:01 | --- | DG40305 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *86 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: K-4.5
Date Sampled: 07/02/24 11:10
Percent Solids: 94

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-10
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 956** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:21 | umhos/cm | DG40348 |
| **Corrosivity (pH)** | **8.05** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40257 |
| **Corrosivity (pH) Sample Temp** | **21.9** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40257 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:22 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-4.5
Date Sampled: 07/02/24 11:30
Percent Solids: 94
Initial Volume: 6.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,1,1-Trichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,1,2,2-Tetrachloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,1,2-Trichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,1-Dichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,1-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,1-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,2,3-Trichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,2,3-Trichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,2,4-Trichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,2,4-Trimethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,2-Dibromoethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,2-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,2-Dichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,2-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,3,5-Trimethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,3-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,3-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,4-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 1,4-Dioxane | ND (0.0862) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 2,2-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 2-Butanone | ND (0.0431) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 2-Chlorotoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 2-Hexanone | ND (0.0431) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 4-Chlorotoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| 4-Isopropyltoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-4.5
Date Sampled: 07/02/24 11:30
Percent Solids: 94
Initial Volume: 6.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0431) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Acetone | ND (0.0431) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Benzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Bromobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Bromochloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Bromodichloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Bromoform | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Bromomethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Carbon Disulfide | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Carbon Tetrachloride | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Chlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Chloroethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Chloroform | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Chloromethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| cis-1,2-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| cis-1,3-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Dibromochloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Dibromomethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Dichlorodifluoromethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Diethyl Ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Di-isopropyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Ethyl tertiary-butyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Ethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Hexachlorobutadiene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Isopropylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Methyl tert-Butyl Ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Methylene Chloride | ND (0.0216) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-4.5
Date Sampled: 07/02/24 11:30
Percent Solids: 94
Initial Volume: 6.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| n-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| n-Propylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| sec-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Styrene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| tert-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Tertiary-amyl methyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Tetrachloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Tetrahydrofuran | ND (0.0172) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Toluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| trans-1,2-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| trans-1,3-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Trichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Trichlorofluoromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Vinyl Chloride | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Xylene O | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Xylene P,M | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |
| Xylenes (Total) | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:57 | D4G0083 | DG40319 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *112 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *95 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *109 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *100 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-4.5
Date Sampled: 07/02/24 11:30
Percent Solids: 94

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-12
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.33) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:57 | 2.29 100 | DG40517 |
| **Barium** | **16.8** (0.93) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:57 | 2.29 100 | DG40517 |
| Cadmium | ND (0.47) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:57 | 2.29 100 | DG40517 |
| **Chromium** | **7.29** (0.93) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:57 | 2.29 100 | DG40517 |
| **Lead** | **24.3** (4.67) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:57 | 2.29 100 | DG40517 |
| **Mercury** | **0.053** (0.032) | --- | 7471B | --- | 1 | AFV | 07/08/24 17:12 | 0.67 40 | DG40553 |
| Selenium | ND (4.67) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:57 | 2.29 100 | DG40517 |
| Silver | ND (0.47) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:57 | 2.29 100 | DG40517 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-4.5
Date Sampled: 07/02/24 11:30
Percent Solids: 94
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 1,2,4-Trichlorobenzene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 1,2-Dichlorobenzene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 1,3-Dichlorobenzene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 1,4-Dichlorobenzene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 2,4,5-Trichlorophenol | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 2,4,6-Trichlorophenol | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 2,4-Dichlorophenol | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 2,4-Dimethylphenol | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 2,4-Dinitrophenol | ND (1.13) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 2,4-Dinitrotoluene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 2,6-Dinitrotoluene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 2-Chloronaphthalene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 2-Chlorophenol | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 2-Methylnaphthalene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 2-Methylphenol | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 2-Nitrophenol | ND (0.563) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 3,3´-Dichlorobenzidine | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 3+4-Methylphenol | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 4-Bromophenyl-phenylether | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 4-Chloroaniline | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| 4-Nitrophenol | ND (1.13) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Acenaphthene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Acenaphthylene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Acetophenone | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Aniline | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Anthracene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-4.5
Date Sampled: 07/02/24 11:30
Percent Solids: 94
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| **Benzo(a)anthracene** | **0.495** (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| **Benzo(a)pyrene** | **0.412** (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| **Benzo(b)fluoranthene** | **0.335** (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Benzo(g,h,i)perylene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| **Benzo(k)fluoranthene** | **0.391** (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| bis(2-Chloroethoxy)methane | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| bis(2-Chloroethyl)ether | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| bis(2-chloroisopropyl)Ether | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| bis(2-Ethylhexyl)phthalate | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Butylbenzylphthalate | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| **Chrysene** | **0.511** (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Dibenzo(a,h)Anthracene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Dibenzofuran | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Diethylphthalate | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Dimethylphthalate | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Di-n-butylphthalate | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Di-n-octylphthalate | ND (0.563) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| **Fluoranthene** | **0.981** (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Fluorene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Hexachlorobenzene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Hexachlorobutadiene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Hexachloroethane | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Indeno(1,2,3-cd)Pyrene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Isophorone | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Naphthalene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Nitrobenzene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-4.5
Date Sampled: 07/02/24 11:30
Percent Solids: 94
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Pentachlorophenol | ND (1.13) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Phenanthrene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Phenol | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| **Pyrene** | **0.797** (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |
| Pyridine | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:24 | D4G0114 | DG40304 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *89 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *89 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *91 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *72 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *75 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *76 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *82 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *75 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-4.5
Date Sampled: 07/02/24 11:30
Percent Solids: 94
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:57 | --- | DG40207 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:57 | --- | DG40207 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:57 | --- | DG40207 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:57 | --- | DG40207 |
| **Aroclor 1248 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:57 | --- | DG40207 |
| **Aroclor 1254** | **0.1** (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:57 | --- | DG40207 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:57 | --- | DG40207 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:57 | --- | DG40207 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:57 | --- | DG40207 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *89 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *87 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-4.5
Date Sampled: 07/02/24 11:30
Percent Solids: 94
Initial Volume: 20g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/3/24 10:40

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| **4,4´-DDT [2C]** | **0.0116** (0.0027) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| Chlordane (Total) | ND (0.0214) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |
| Toxaphene | ND (0.134) | --- | 8081B | --- | 1 | 07/07/24 20:10 | D4G0134 | DG40303 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *54 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *59 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-4.5
Date Sampled: 07/02/24 11:30
Percent Solids: 94
Initial Volume: 10.4g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 18:10 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 18:10 | D4G0206 | DG40831 |
| 2,4-D | ND (0.048) | --- | 8151A | --- | 1 | 07/10/24 18:10 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 18:10 | D4G0206 | DG40831 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 07/10/24 18:10 | D4G0206 | DG40831 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 18:10 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.048) | --- | 8151A | --- | 1 | 07/10/24 18:10 | D4G0206 | DG40831 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 18:10 | D4G0206 | DG40831 |
| MCPA | ND (2.39) | --- | 8151A | --- | 1 | 07/10/24 18:10 | D4G0206 | DG40831 |
| MCPP | ND (2.42) | --- | 8151A | --- | 1 | 07/10/24 18:10 | D4G0206 | DG40831 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-4.5
Date Sampled: 07/02/24 11:30
Percent Solids: 94
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 9:35

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **64.2** (10.8) | --- | 8100M | --- | 1 | 07/03/24 22:34 | --- | DG40305 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *100 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: L-M-4.5
Date Sampled: 07/02/24 11:30
Percent Solids: 94

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-12
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 1590** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:21 | umhos/cm | DG40348 |
| **Corrosivity (pH)** | **8.35** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40257 |
| **Corrosivity (pH) Sample Temp** | **21.7** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40257 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:22 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-7
Date Sampled: 07/02/24 11:55
Percent Solids: 93
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,1,1-Trichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,1,2,2-Tetrachloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,1,2-Trichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,1-Dichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,1-Dichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,1-Dichloropropene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,2,3-Trichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,2,3-Trichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,2,4-Trichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,2,4-Trimethylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,2-Dibromoethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,2-Dichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,2-Dichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,2-Dichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,3,5-Trimethylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,3-Dichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,3-Dichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,4-Dichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 1,4-Dioxane | ND (0.0908) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 2,2-Dichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 2-Butanone | ND (0.0454) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 2-Chlorotoluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 2-Hexanone | ND (0.0454) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 4-Chlorotoluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| 4-Isopropyltoluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-7
Date Sampled: 07/02/24 11:55
Percent Solids: 93
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0454) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Acetone | ND (0.0454) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Benzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Bromobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Bromochloromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Bromodichloromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Bromoform | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Bromomethane | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Carbon Disulfide | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Carbon Tetrachloride | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Chlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Chloroethane | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Chloroform | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Chloromethane | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| cis-1,2-Dichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| cis-1,3-Dichloropropene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Dibromochloromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Dibromomethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Dichlorodifluoromethane | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Diethyl Ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Di-isopropyl ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Ethyl tertiary-butyl ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Ethylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Hexachlorobutadiene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Isopropylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Methyl tert-Butyl Ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Methylene Chloride | ND (0.0227) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-7
Date Sampled: 07/02/24 11:55
Percent Solids: 93
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| n-Butylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| n-Propylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| sec-Butylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Styrene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| tert-Butylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Tertiary-amyl methyl ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Tetrachloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Tetrahydrofuran | ND (0.0182) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Toluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| trans-1,2-Dichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| trans-1,3-Dichloropropene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Trichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Trichlorofluoromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Vinyl Chloride | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Xylene O | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Xylene P,M | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |
| Xylenes (Total) | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:22 | D4G0083 | DG40319 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *111 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *92 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *109 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-7
Date Sampled: 07/02/24 11:55
Percent Solids: 93

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-14
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.56) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:59 | 2.09 100 | DG40517 |
| **Barium** | **13.0** (1.03) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:59 | 2.09 100 | DG40517 |
| Cadmium | ND (0.51) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:59 | 2.09 100 | DG40517 |
| **Chromium** | **8.35** (1.03) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:59 | 2.09 100 | DG40517 |
| **Lead** | **17.0** (5.13) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:59 | 2.09 100 | DG40517 |
| **Mercury** | **0.099** (0.035) | --- | 7471B | --- | 1 | AFV | 07/08/24 17:15 | 0.6 40 | DG40553 |
| Selenium | ND (5.13) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:59 | 2.09 100 | DG40517 |
| Silver | ND (0.51) | --- | 6010D | --- | 1 | CEV | 07/08/24 14:59 | 2.09 100 | DG40517 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-7
Date Sampled: 07/02/24 11:55
Percent Solids: 93
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 1,2,4-Trichlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 1,2-Dichlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 1,3-Dichlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 1,4-Dichlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 2,4,5-Trichlorophenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 2,4,6-Trichlorophenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 2,4-Dichlorophenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 2,4-Dimethylphenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 2,4-Dinitrophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 2,4-Dinitrotoluene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 2,6-Dinitrotoluene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 2-Chloronaphthalene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 2-Chlorophenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 2-Methylnaphthalene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 2-Methylphenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 2-Nitrophenol | ND (0.530) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 3,3´-Dichlorobenzidine | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 3+4-Methylphenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 4-Bromophenyl-phenylether | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 4-Chloroaniline | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| 4-Nitrophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Acenaphthene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Acenaphthylene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Acetophenone | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Aniline | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Anthracene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-7
Date Sampled: 07/02/24 11:55
Percent Solids: 93
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Benzo(a)anthracene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Benzo(a)pyrene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Benzo(b)fluoranthene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Benzo(g,h,i)perylene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Benzo(k)fluoranthene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| bis(2-Chloroethoxy)methane | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| bis(2-Chloroethyl)ether | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| bis(2-chloroisopropyl)Ether | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| bis(2-Ethylhexyl)phthalate | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Butylbenzylphthalate | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Chrysene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Dibenzo(a,h)Anthracene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Dibenzofuran | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Diethylphthalate | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Dimethylphthalate | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Di-n-butylphthalate | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Di-n-octylphthalate | ND (0.530) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Fluoranthene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Fluorene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Hexachlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Hexachlorobutadiene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Hexachloroethane | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Indeno(1,2,3-cd)Pyrene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Isophorone | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Naphthalene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Nitrobenzene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-7
Date Sampled: 07/02/24 11:55
Percent Solids: 93
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Pentachlorophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Phenanthrene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Phenol | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Pyrene | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |
| Pyridine | ND (0.265) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:55 | D4G0114 | DG40304 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *80 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *77 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *76 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *66 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *65 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *69 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *73 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *71 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-7
Date Sampled: 07/02/24 11:55
Percent Solids: 93
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:17 | --- | DG40207 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:17 | --- | DG40207 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:17 | --- | DG40207 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:17 | --- | DG40207 |
| **Aroclor 1248** | **0.09** (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:17 | --- | DG40207 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:17 | --- | DG40207 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:17 | --- | DG40207 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:17 | --- | DG40207 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:17 | --- | DG40207 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-7
Date Sampled: 07/02/24 11:55
Percent Solids: 93
Initial Volume: 20.3g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/3/24 10:40

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| 4,4´-DDE | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| **4,4´-DDT** | **0.0101** (0.0026) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| Aldrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| alpha-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| alpha-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| beta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| Chlordane (Total) | ND (0.0211) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| delta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| Dieldrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| Endosulfan I | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| Endosulfan II | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| Endosulfan Sulfate | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| Endrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| Endrin Ketone | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| gamma-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| Heptachlor | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| Heptachlor Epoxide | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| Hexachlorobenzene | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| Methoxychlor | ND (0.0026) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |
| Toxaphene | ND (0.132) | --- | 8081B | --- | 1 | 07/07/24 20:37 | D4G0134 | DG40303 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *69 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-7
Date Sampled: 07/02/24 11:55
Percent Solids: 93
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 18:59 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 18:59 | D4G0206 | DG40831 |
| 2,4-D | ND (0.050) | --- | 8151A | --- | 1 | 07/10/24 18:59 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 07/10/24 18:59 | D4G0206 | DG40831 |
| Dalapon | ND (0.048) | --- | 8151A | --- | 1 | 07/10/24 18:59 | D4G0206 | DG40831 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 18:59 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.050) | --- | 8151A | --- | 1 | 07/10/24 18:59 | D4G0206 | DG40831 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 07/10/24 18:59 | D4G0206 | DG40831 |
| MCPA | ND (2.47) | --- | 8151A | --- | 1 | 07/10/24 18:59 | D4G0206 | DG40831 |
| MCPP | ND (2.49) | --- | 8151A | --- | 1 | 07/10/24 18:59 | D4G0206 | DG40831 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-7
Date Sampled: 07/02/24 11:55
Percent Solids: 93
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 9:35

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **30.9** (10.7) | --- | 8100M | --- | 1 | 07/03/24 23:06 | --- | DG40305 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *84 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-7
Date Sampled: 07/02/24 11:55
Percent Solids: 93

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-14
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 680** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:21 | umhos/cm | DG40348 |
| **Corrosivity (pH)** | **7.43** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40258 |
| **Corrosivity (pH) Sample Temp** | **21.6** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40258 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:29 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-7
Date Sampled: 07/02/24 12:15
Percent Solids: 94
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,1,1-Trichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,1,2,2-Tetrachloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,1,2-Trichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,1-Dichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,1-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,1-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,2,3-Trichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,2,3-Trichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,2,4-Trichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,2,4-Trimethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,2-Dibromoethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,2-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,2-Dichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,2-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,3,5-Trimethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,3-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,3-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,4-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 1,4-Dioxane | ND (0.0913) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 2,2-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 2-Butanone | ND (0.0456) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 2-Chlorotoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 2-Hexanone | ND (0.0456) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 4-Chlorotoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| 4-Isopropyltoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-7
Date Sampled: 07/02/24 12:15
Percent Solids: 94
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0456) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Acetone | ND (0.0456) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Benzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Bromobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Bromochloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Bromodichloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Bromoform | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Bromomethane | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Carbon Disulfide | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Carbon Tetrachloride | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Chlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Chloroethane | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Chloroform | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Chloromethane | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| cis-1,2-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| cis-1,3-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Dibromochloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Dibromomethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Dichlorodifluoromethane | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Diethyl Ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Di-isopropyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Ethyl tertiary-butyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Ethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Hexachlorobutadiene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Isopropylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Methyl tert-Butyl Ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Methylene Chloride | ND (0.0228) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-7
Date Sampled: 07/02/24 12:15
Percent Solids: 94
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| n-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| n-Propylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| sec-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Styrene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| tert-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Tertiary-amyl methyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Tetrachloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Tetrahydrofuran | ND (0.0183) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Toluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| trans-1,2-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| trans-1,3-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Trichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Trichlorofluoromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Vinyl Chloride | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Xylene O | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Xylene P,M | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |
| Xylenes (Total) | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 19:48 | D4G0083 | DG40319 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *113 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *95 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *110 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *99 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-7
Date Sampled: 07/02/24 12:15
Percent Solids: 94

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-16
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.22) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:02 | 2.39 100 | DG40517 |
| **Barium** | **11.7** (0.89) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:02 | 2.39 100 | DG40517 |
| Cadmium | ND (0.44) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:02 | 2.39 100 | DG40517 |
| **Chromium** | **11.0** (0.89) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:02 | 2.39 100 | DG40517 |
| **Lead** | **14.1** (4.43) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:02 | 2.39 100 | DG40517 |
| Mercury | ND (0.030) | --- | 7471B | --- | 1 | AFV | 07/08/24 17:17 | 0.71 40 | DG40553 |
| Selenium | ND (4.43) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:02 | 2.39 100 | DG40517 |
| Silver | ND (0.44) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:02 | 2.39 100 | DG40517 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-7
Date Sampled: 07/02/24 12:15
Percent Solids: 94
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 1,2,4-Trichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 1,2-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 1,3-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 1,4-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 2,4,5-Trichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 2,4,6-Trichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 2,4-Dichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 2,4-Dimethylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 2,4-Dinitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 2,4-Dinitrotoluene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 2,6-Dinitrotoluene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 2-Chloronaphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 2-Chlorophenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 2-Methylnaphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 2-Methylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 2-Nitrophenol | ND (0.554) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 3,3´-Dichlorobenzidine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 3+4-Methylphenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 4-Bromophenyl-phenylether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 4-Chloroaniline | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| 4-Nitrophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Acenaphthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Acenaphthylene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Acetophenone | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Aniline | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Anthracene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-7
Date Sampled: 07/02/24 12:15
Percent Solids: 94
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Benzo(a)anthracene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Benzo(a)pyrene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Benzo(b)fluoranthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Benzo(g,h,i)perylene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Benzo(k)fluoranthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| bis(2-Chloroethoxy)methane | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| bis(2-Chloroethyl)ether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| bis(2-chloroisopropyl)Ether | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| bis(2-Ethylhexyl)phthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Butylbenzylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Chrysene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Dibenzo(a,h)Anthracene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Dibenzofuran | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Diethylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Dimethylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Di-n-butylphthalate | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Di-n-octylphthalate | ND (0.554) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Fluoranthene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Fluorene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Hexachlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Hexachlorobutadiene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Hexachloroethane | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Indeno(1,2,3-cd)Pyrene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Isophorone | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Naphthalene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Nitrobenzene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-7
Date Sampled: 07/02/24 12:15
Percent Solids: 94
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Pentachlorophenol | ND (1.11) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Phenanthrene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Phenol | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Pyrene | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |
| Pyridine | ND (0.277) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:25 | D4G0114 | DG40304 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *81 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *89 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *77 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *69 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *63 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *68 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *80 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *78 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-7
Date Sampled: 07/02/24 12:15
Percent Solids: 94
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:37 | --- | DG40207 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:37 | --- | DG40207 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:37 | --- | DG40207 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:37 | --- | DG40207 |
| **Aroclor 1248** | **0.06** (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:37 | --- | DG40207 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:37 | --- | DG40207 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:37 | --- | DG40207 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:37 | --- | DG40207 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:37 | --- | DG40207 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *93 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *89 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-7
Date Sampled: 07/02/24 12:15
Percent Solids: 94
Initial Volume: 20.8g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/3/24 10:40

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| 4,4´-DDE | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| **4,4´-DDT** | **0.0088** (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| Aldrin | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| alpha-BHC | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| alpha-Chlordane | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| beta-BHC | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| Chlordane (Total) | ND (0.0204) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| delta-BHC | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| Dieldrin | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| Endosulfan I | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| Endosulfan II | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| Endosulfan Sulfate | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| Endrin | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| Endrin Ketone | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| gamma-BHC (Lindane) | ND (0.0015) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| gamma-Chlordane | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| Heptachlor | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| Heptachlor Epoxide | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| Hexachlorobenzene | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| Methoxychlor | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |
| Toxaphene | ND (0.127) | --- | 8081B | --- | 1 | 07/07/24 21:05 | D4G0134 | DG40303 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *63 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *65 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-7
Date Sampled: 07/02/24 12:15
Percent Solids: 94
Initial Volume: 10g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 19:25 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 19:25 | D4G0206 | DG40831 |
| 2,4-D | ND (0.050) | --- | 8151A | --- | 1 | 07/10/24 19:25 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 07/10/24 19:25 | D4G0206 | DG40831 |
| Dalapon | ND (0.048) | --- | 8151A | --- | 1 | 07/10/24 19:25 | D4G0206 | DG40831 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 19:25 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.050) | --- | 8151A | --- | 1 | 07/10/24 19:25 | D4G0206 | DG40831 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 07/10/24 19:25 | D4G0206 | DG40831 |
| MCPA | ND (2.46) | --- | 8151A | --- | 1 | 07/10/24 19:25 | D4G0206 | DG40831 |
| MCPP | ND (2.49) | --- | 8151A | --- | 1 | 07/10/24 19:25 | D4G0206 | DG40831 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *68 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-7
Date Sampled: 07/02/24 12:15
Percent Solids: 94
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 9:35

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **11.4** (10.1) | --- | 8100M | --- | 1 | 07/03/24 23:38 | --- | DG40305 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *82 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-7
Date Sampled: 07/02/24 12:15
Percent Solids: 94

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-16
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 525** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:21 | umhos/cm | DG40348 |
| **Corrosivity (pH)** | **7.30** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40258 |
| **Corrosivity (pH) Sample Temp** | **21.7** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40258 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:29 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-7
Date Sampled: 07/02/24 12:30
Percent Solids: 96
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,1,1-Trichloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,1,2,2-Tetrachloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,1,2-Trichloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,1-Dichloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,1-Dichloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,1-Dichloropropene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,2,3-Trichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,2,3-Trichloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,2,4-Trichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,2,4-Trimethylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,2-Dibromoethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,2-Dichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,2-Dichloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,2-Dichloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,3,5-Trimethylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,3-Dichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,3-Dichloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,4-Dichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 1,4-Dioxane | ND (0.0886) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 2,2-Dichloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 2-Butanone | ND (0.0443) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 2-Chlorotoluene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 2-Hexanone | ND (0.0443) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 4-Chlorotoluene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| 4-Isopropyltoluene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-7
Date Sampled: 07/02/24 12:30
Percent Solids: 96
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0443) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Acetone | ND (0.0443) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Benzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Bromobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Bromochloromethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Bromodichloromethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Bromoform | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Bromomethane | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Carbon Disulfide | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Carbon Tetrachloride | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Chlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Chloroethane | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Chloroform | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Chloromethane | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| cis-1,2-Dichloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| cis-1,3-Dichloropropene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Dibromochloromethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Dibromomethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Dichlorodifluoromethane | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Diethyl Ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Di-isopropyl ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Ethyl tertiary-butyl ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Ethylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Hexachlorobutadiene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Isopropylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Methyl tert-Butyl Ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Methylene Chloride | ND (0.0221) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-7
Date Sampled: 07/02/24 12:30
Percent Solids: 96
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| n-Butylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| n-Propylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| sec-Butylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Styrene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| tert-Butylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Tertiary-amyl methyl ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Tetrachloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Tetrahydrofuran | ND (0.0177) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Toluene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| trans-1,2-Dichloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| trans-1,3-Dichloropropene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Trichloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Trichlorofluoromethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Vinyl Chloride | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Xylene O | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Xylene P,M | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |
| Xylenes (Total) | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:13 | D4G0083 | DG40319 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *113 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *95 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *109 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-7
Date Sampled: 07/02/24 12:30
Percent Solids: 96

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-18
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.53) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:04 | 2.07 100 | DG40517 |
| **Barium** | **10.1** (1.01) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:04 | 2.07 100 | DG40517 |
| Cadmium | ND (0.51) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:04 | 2.07 100 | DG40517 |
| **Chromium** | **5.74** (1.01) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:04 | 2.07 100 | DG40517 |
| **Lead** | **7.90** (5.05) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:04 | 2.07 100 | DG40517 |
| Mercury | ND (0.032) | --- | 7471B | --- | 1 | AFV | 07/08/24 17:19 | 0.64 40 | DG40553 |
| Selenium | ND (5.05) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:04 | 2.07 100 | DG40517 |
| Silver | ND (0.51) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:04 | 2.07 100 | DG40517 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-7
Date Sampled: 07/02/24 12:30
Percent Solids: 96
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.025) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 1,2,4-Trichlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 1,2-Dichlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 1,3-Dichlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 1,4-Dichlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 2,4,5-Trichlorophenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 2,4,6-Trichlorophenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 2,4-Dichlorophenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 2,4-Dimethylphenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 2,4-Dinitrophenol | ND (1.00) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 2,4-Dinitrotoluene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 2,6-Dinitrotoluene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 2-Chloronaphthalene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 2-Chlorophenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 2-Methylnaphthalene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 2-Methylphenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 2-Nitrophenol | ND (0.500) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 3,3´-Dichlorobenzidine | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 3+4-Methylphenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 4-Bromophenyl-phenylether | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 4-Chloroaniline | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| 4-Nitrophenol | ND (1.00) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Acenaphthene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Acenaphthylene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Acetophenone | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Aniline | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Anthracene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-7
Date Sampled: 07/02/24 12:30
Percent Solids: 96
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Benzo(a)anthracene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Benzo(a)pyrene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Benzo(b)fluoranthene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Benzo(g,h,i)perylene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Benzo(k)fluoranthene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| bis(2-Chloroethoxy)methane | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| bis(2-Chloroethyl)ether | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| bis(2-chloroisopropyl)Ether | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| bis(2-Ethylhexyl)phthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Butylbenzylphthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Chrysene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Dibenzo(a,h)Anthracene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Dibenzofuran | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Diethylphthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Dimethylphthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Di-n-butylphthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Di-n-octylphthalate | ND (0.500) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Fluoranthene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Fluorene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Hexachlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Hexachlorobutadiene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Hexachloroethane | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Indeno(1,2,3-cd)Pyrene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Isophorone | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Naphthalene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Nitrobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-7
Date Sampled: 07/02/24 12:30
Percent Solids: 96
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Pentachlorophenol | ND (1.00) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Phenanthrene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Phenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Pyrene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |
| Pyridine | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:56 | D4G0114 | DG40304 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *85 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *97 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *85 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *75 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *69 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *65 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *89 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *81 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-7
Date Sampled: 07/02/24 12:30
Percent Solids: 96
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:56 | --- | DG40207 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:56 | --- | DG40207 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:56 | --- | DG40207 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:56 | --- | DG40207 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:56 | --- | DG40207 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:56 | --- | DG40207 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:56 | --- | DG40207 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:56 | --- | DG40207 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:56 | --- | DG40207 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *94 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *88 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-7
Date Sampled: 07/02/24 12:30
Percent Solids: 96
Initial Volume: 20.9g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/3/24 10:40

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| 4,4´-DDE | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| **4,4´-DDT** | **0.0031** (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| Aldrin | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| alpha-BHC | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| alpha-Chlordane | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| beta-BHC | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| Chlordane (Total) | ND (0.0200) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| delta-BHC | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| Dieldrin | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| Endosulfan I | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| Endosulfan II | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| Endosulfan Sulfate | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| Endrin | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| Endrin Ketone | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| gamma-BHC (Lindane) | ND (0.0015) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| gamma-Chlordane | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| Heptachlor | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| Heptachlor Epoxide | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| Hexachlorobenzene | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| Methoxychlor | ND (0.0025) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |
| Toxaphene | ND (0.125) | --- | 8081B | --- | 1 | 07/07/24 21:33 | D4G0134 | DG40303 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *66 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *68 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-7
Date Sampled: 07/02/24 12:30
Percent Solids: 96
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 19:52 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 19:52 | D4G0206 | DG40831 |
| 2,4-D | ND (0.048) | --- | 8151A | --- | 1 | 07/10/24 19:52 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 19:52 | D4G0206 | DG40831 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 07/10/24 19:52 | D4G0206 | DG40831 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 19:52 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.048) | --- | 8151A | --- | 1 | 07/10/24 19:52 | D4G0206 | DG40831 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 19:52 | D4G0206 | DG40831 |
| MCPA | ND (2.38) | --- | 8151A | --- | 1 | 07/10/24 19:52 | D4G0206 | DG40831 |
| MCPP | ND (2.41) | --- | 8151A | --- | 1 | 07/10/24 19:52 | D4G0206 | DG40831 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-7
Date Sampled: 07/02/24 12:30
Percent Solids: 96
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 9:35

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (10.5) | --- | 8100M | --- | 1 | 07/04/24 0:10 | --- | DG40305 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *88 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-7
Date Sampled: 07/02/24 12:30
Percent Solids: 96

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-18
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 2190** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:21 | umhos/cm | DG40348 |
| **Corrosivity (pH)** | **6.13** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40258 |
| **Corrosivity (pH) Sample Temp** | **21.6** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40258 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:29 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-7
Date Sampled: 07/02/24 12:45
Percent Solids: 97
Initial Volume: 5.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,1,1-Trichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,1,2,2-Tetrachloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,1,2-Trichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,1-Dichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,1-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,1-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,2,3-Trichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,2,3-Trichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,2,4-Trichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,2,4-Trimethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,2-Dibromoethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,2-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,2-Dichloroethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,2-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,3,5-Trimethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,3-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,3-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,4-Dichlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 1,4-Dioxane | ND (0.0956) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 2,2-Dichloropropane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 2-Butanone | ND (0.0478) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 2-Chlorotoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 2-Hexanone | ND (0.0478) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 4-Chlorotoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| 4-Isopropyltoluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-7
Date Sampled: 07/02/24 12:45
Percent Solids: 97
Initial Volume: 5.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0478) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Acetone | ND (0.0478) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Benzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Bromobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Bromochloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Bromodichloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Bromoform | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Bromomethane | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Carbon Disulfide | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Carbon Tetrachloride | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Chlorobenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Chloroethane | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Chloroform | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Chloromethane | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| cis-1,2-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| cis-1,3-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Dibromochloromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Dibromomethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Dichlorodifluoromethane | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Diethyl Ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Di-isopropyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Ethyl tertiary-butyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Ethylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Hexachlorobutadiene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Isopropylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Methyl tert-Butyl Ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Methylene Chloride | ND (0.0239) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-7
Date Sampled: 07/02/24 12:45
Percent Solids: 97
Initial Volume: 5.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| n-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| n-Propylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| sec-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Styrene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| tert-Butylbenzene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Tertiary-amyl methyl ether | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Tetrachloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Tetrahydrofuran | ND (0.0191) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Toluene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| trans-1,2-Dichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| trans-1,3-Dichloropropene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Trichloroethene | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Trichlorofluoromethane | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Vinyl Chloride | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Xylene O | ND (0.0048) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Xylene P,M | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |
| Xylenes (Total) | ND (0.0096) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 20:39 | D4G0083 | DG40319 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *114 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *94 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *109 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *100 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-7
Date Sampled: 07/02/24 12:45
Percent Solids: 97

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-20
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.22) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:06 | 2.33 100 | DG40517 |
| **Barium** | **6.88** (0.89) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:06 | 2.33 100 | DG40517 |
| Cadmium | ND (0.44) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:06 | 2.33 100 | DG40517 |
| **Chromium** | **6.42** (0.89) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:06 | 2.33 100 | DG40517 |
| **Lead** | **9.57** (4.43) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:06 | 2.33 100 | DG40517 |
| Mercury | ND (0.031) | --- | 7471B | --- | 1 | AFV | 07/08/24 17:22 | 0.66 40 | DG40553 |
| Selenium | ND (4.43) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:06 | 2.33 100 | DG40517 |
| Silver | ND (0.44) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:06 | 2.33 100 | DG40517 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-7
Date Sampled: 07/02/24 12:45
Percent Solids: 97
Initial Volume: 20.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.025) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 1,2,4-Trichlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 1,2-Dichlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 1,3-Dichlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 1,4-Dichlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 2,4,5-Trichlorophenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 2,4,6-Trichlorophenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 2,4-Dichlorophenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 2,4-Dimethylphenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 2,4-Dinitrophenol | ND (0.998) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 2,4-Dinitrotoluene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 2,6-Dinitrotoluene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 2-Chloronaphthalene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 2-Chlorophenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 2-Methylnaphthalene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 2-Methylphenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 2-Nitrophenol | ND (0.499) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 3,3´-Dichlorobenzidine | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 3+4-Methylphenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 4-Bromophenyl-phenylether | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 4-Chloroaniline | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| 4-Nitrophenol | ND (0.998) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Acenaphthene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Acenaphthylene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Acetophenone | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Aniline | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Anthracene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-7
Date Sampled: 07/02/24 12:45
Percent Solids: 97
Initial Volume: 20.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Benzo(a)anthracene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Benzo(a)pyrene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Benzo(b)fluoranthene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Benzo(g,h,i)perylene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Benzo(k)fluoranthene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| bis(2-Chloroethoxy)methane | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| bis(2-Chloroethyl)ether | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| bis(2-chloroisopropyl)Ether | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| bis(2-Ethylhexyl)phthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Butylbenzylphthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Chrysene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Dibenzo(a,h)Anthracene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Dibenzofuran | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Diethylphthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Dimethylphthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Di-n-butylphthalate | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Di-n-octylphthalate | ND (0.499) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Fluoranthene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Fluorene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Hexachlorobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Hexachlorobutadiene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Hexachloroethane | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Indeno(1,2,3-cd)Pyrene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Isophorone | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Naphthalene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Nitrobenzene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-7
Date Sampled: 07/02/24 12:45
Percent Solids: 97
Initial Volume: 20.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Pentachlorophenol | ND (0.998) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Phenanthrene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Phenol | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Pyrene | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |
| Pyridine | ND (0.250) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:26 | D4G0114 | DG40304 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *76 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *81 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *73 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *70 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *63 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *69 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *71 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *73 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-7
Date Sampled: 07/02/24 12:45
Percent Solids: 97
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:16 | --- | DG40207 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:16 | --- | DG40207 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:16 | --- | DG40207 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:16 | --- | DG40207 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:16 | --- | DG40207 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:16 | --- | DG40207 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:16 | --- | DG40207 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:16 | --- | DG40207 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:16 | --- | DG40207 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *95 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *88 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-7
Date Sampled: 07/02/24 12:45
Percent Solids: 97
Initial Volume: 19.7g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/3/24 10:40

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| 4,4´-DDE | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| **4,4´-DDT** | **0.0032** (0.0026) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| Aldrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| alpha-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| alpha-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| beta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| Chlordane (Total) | ND (0.0210) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| delta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| Dieldrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| Endosulfan I | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| Endosulfan II | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| Endosulfan Sulfate | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| Endrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| Endrin Ketone | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| gamma-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| Heptachlor | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| Heptachlor Epoxide | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| Hexachlorobenzene | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| Methoxychlor | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |
| Toxaphene | ND (0.131) | --- | 8081B | --- | 1 | 07/08/24 0:19 | D4G0134 | DG40303 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *64 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *63 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-7
Date Sampled: 07/02/24 12:45
Percent Solids: 97
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 21:38 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 21:38 | D4G0206 | DG40831 |
| 2,4-D | ND (0.048) | --- | 8151A | --- | 1 | 07/10/24 21:38 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.048) | --- | 8151A | --- | 1 | 07/10/24 21:38 | D4G0206 | DG40831 |
| Dalapon | ND (0.046) | --- | 8151A | --- | 1 | 07/10/24 21:38 | D4G0206 | DG40831 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 21:38 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.048) | --- | 8151A | --- | 1 | 07/10/24 21:38 | D4G0206 | DG40831 |
| Dinoseb | ND (0.048) | --- | 8151A | --- | 1 | 07/10/24 21:38 | D4G0206 | DG40831 |
| MCPA | ND (2.35) | --- | 8151A | --- | 1 | 07/10/24 21:38 | D4G0206 | DG40831 |
| MCPP | ND (2.38) | --- | 8151A | --- | 1 | 07/10/24 21:38 | D4G0206 | DG40831 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-7
Date Sampled: 07/02/24 12:45
Percent Solids: 97
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 9:35

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (10.6) | --- | 8100M | --- | 1 | 07/04/24 0:43 | --- | DG40305 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *85 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-7
Date Sampled: 07/02/24 12:45
Percent Solids: 97

ESS Laboratory Work Order: 24G0130
ESS Laboratory Sample ID: 24G0130-20
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 1650** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:21 | umhos/cm | DG40348 |
| **Corrosivity (pH)** | **5.79** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40258 |
| **Corrosivity (pH) Sample Temp** | **21.6** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40258 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:36 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DG40517 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Arsenic | ND | 2.48 | mg/kg wet | | | | | | | |
| Barium | ND | 0.99 | mg/kg wet | | | | | | | |
| Cadmium | ND | 0.50 | mg/kg wet | | | | | | | |
| Chromium | ND | 0.99 | mg/kg wet | | | | | | | |
| Lead | ND | 4.95 | mg/kg wet | | | | | | | |
| Selenium | ND | 4.95 | mg/kg wet | | | | | | | |
| Silver | ND | 0.50 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Arsenic | 284 | 7.94 | mg/kg wet | 360.0 | | 79 | 71-102 | | | |
| Barium | 264 | 3.17 | mg/kg wet | 332.0 | | 80 | 75-108 | | | |
| Cadmium | 198 | 1.59 | mg/kg wet | 238.0 | | 83 | 80-120 | | | |
| Chromium | 175 | 3.17 | mg/kg wet | 199.0 | | 88 | 80-120 | | | |
| Lead | 84.9 | 15.9 | mg/kg wet | 100.0 | | 85 | 80-120 | | | |
| Selenium | 146 | 15.9 | mg/kg wet | 170.0 | | 86 | 80-120 | | | |
| Silver | 75.0 | 1.59 | mg/kg wet | 88.60 | | 85 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Arsenic | 305 | 8.20 | mg/kg wet | 360.0 | | 85 | 71-102 | 7 | 30 | |
| Barium | 295 | 3.28 | mg/kg wet | 332.0 | | 89 | 80-120 | 11 | 30 | |
| Cadmium | 204 | 1.64 | mg/kg wet | 238.0 | | 86 | 80-120 | 3 | 30 | |
| Chromium | 182 | 3.28 | mg/kg wet | 199.0 | | 92 | 80-120 | 4 | 30 | |
| Lead | 91.0 | 16.4 | mg/kg wet | 100.0 | | 91 | 80-120 | 7 | 30 | |
| Selenium | 155 | 16.4 | mg/kg wet | 170.0 | | 91 | 80-120 | 6 | 30 | |
| Silver | 79.2 | 1.64 | mg/kg wet | 88.60 | | 89 | 75-108 | 5 | 30 | |
| **Reference** | | | | | | | | | | |
| Lead | 3980 | 78.1 | mg/kg wet | 4490 | | 89 | 81-120 | | | |
| **Batch DG40553 - 7471B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Mercury | ND | 0.027 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Mercury | 15.0 | 3.30 | mg/kg wet | 14.40 | | 104 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Mercury | 15.6 | 3.19 | mg/kg wet | 14.40 | | 108 | 80-120 | 4 | 30 | |
| **1311 TCLP Metals** | | | | | | | | | | |
| **Batch DG41018 - 3005A_TCLP** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Lead | ND | 0.05 | mg/L | | | | | | | |
| **LCS** | | | | | | | | | | |
| Lead | 0.49 | 0.05 | mg/L | 0.5000 | | 98 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Lead | 0.48 | 0.05 | mg/L | 0.5000 | | 96 | 80-120 | 2 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40319 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dioxane | ND | 0.100 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Acetone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromoform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Carbon Disulfide | ND | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Chloroform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40319 - 5035** | | | | | | | | | | |
| Dibromomethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methylene Chloride | ND | 0.0250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.0050 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 0.0200 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.0100 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.0050 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.0100 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0515* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0480* | | mg/kg wet | *0.05000* | | *96* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0513* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0513* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| 1,1,1-Trichloroethane | 0.0528 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 0.0526 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 40-160 | | | |
| 1,1,2-Trichloroethane | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| 1,1-Dichloroethane | 0.0541 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| 1,1-Dichloroethene | 0.0632 | 0.0050 | mg/kg wet | 0.05000 | | 126 | 70-130 | | | |
| 1,1-Dichloropropene | 0.0547 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| 1,2,3-Trichloropropane | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 0.0538 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0582 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0465 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |
| 1,2-Dibromoethane | 0.0543 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40319 - 5035** | | | | | | | | | | |
| 1,2-Dichlorobenzene | 0.0517 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,2-Dichloroethane | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| 1,2-Dichloropropane | 0.0555 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0576 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | | | |
| 1,3-Dichlorobenzene | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| 1,3-Dichloropropane | 0.0560 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | | | |
| 1,4-Dichlorobenzene | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| 1,4-Dioxane | 1.29 | 0.100 | mg/kg wet | 1.000 | | 129 | 70-130 | | | |
| 2,2-Dichloropropane | 0.0532 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| 2-Butanone | 0.250 | 0.0500 | mg/kg wet | 0.2500 | | 100 | 40-160 | | | |
| 2-Chlorotoluene | 0.0560 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | | | |
| 2-Hexanone | 0.236 | 0.0500 | mg/kg wet | 0.2500 | | 95 | 40-160 | | | |
| 4-Chlorotoluene | 0.0555 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| 4-Isopropyltoluene | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 0.254 | 0.0500 | mg/kg wet | 0.2500 | | 102 | 40-160 | | | |
| Acetone | 0.258 | 0.0500 | mg/kg wet | 0.2500 | | 103 | 40-160 | | | |
| Benzene | 0.0560 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | | | |
| Bromobenzene | 0.0556 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| Bromochloromethane | 0.0551 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| Bromodichloromethane | 0.0553 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| Bromoform | 0.0465 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 40-160 | | | |
| Bromomethane | 0.0608 | 0.0100 | mg/kg wet | 0.05000 | | 122 | 40-160 | | | |
| Carbon Disulfide | 0.0647 | 0.0050 | mg/kg wet | 0.05000 | | 129 | 70-130 | | | |
| Carbon Tetrachloride | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Chlorobenzene | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Chloroethane | 0.0595 | 0.0100 | mg/kg wet | 0.05000 | | 119 | 40-160 | | | |
| Chloroform | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| Chloromethane | 0.0562 | 0.0100 | mg/kg wet | 0.05000 | | 112 | 40-160 | | | |
| cis-1,2-Dichloroethene | 0.0575 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | | | |
| cis-1,3-Dichloropropene | 0.0599 | 0.0050 | mg/kg wet | 0.05000 | | 120 | 40-160 | | | |
| Dibromochloromethane | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 40-160 | | | |
| Dibromomethane | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| Dichlorodifluoromethane | 0.0330 | 0.0100 | mg/kg wet | 0.05000 | | 66 | 40-160 | | | |
| Diethyl Ether | 0.0667 | 0.0050 | mg/kg wet | 0.05000 | | 133 | 70-130 | | | B+ |
| Di-isopropyl ether | 0.0617 | 0.0050 | mg/kg wet | 0.05000 | | 123 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 0.0646 | 0.0050 | mg/kg wet | 0.05000 | | 129 | 70-130 | | | |
| Ethylbenzene | 0.0565 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | | | |
| Hexachlorobutadiene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 40-160 | | | |
| Isopropylbenzene | 0.0655 | 0.0050 | mg/kg wet | 0.05000 | | 131 | 70-130 | | | B+ |
| Methyl tert-Butyl Ether | 0.0610 | 0.0050 | mg/kg wet | 0.05000 | | 122 | 70-130 | | | |
| Methylene Chloride | 0.0622 | 0.0250 | mg/kg wet | 0.05000 | | 124 | 70-130 | | | |
| Naphthalene | 0.0551 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 40-160 | | | |
| n-Butylbenzene | 0.0560 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | | | |
| n-Propylbenzene | 0.0572 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | | | |
| sec-Butylbenzene | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40319 - 5035** | | | | | | | | | | |
| Styrene | 0.0563 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 40-160 | | | |
| tert-Butylbenzene | 0.0576 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | | | |
| Tertiary-amyl methyl ether | 0.0655 | 0.0050 | mg/kg wet | 0.05000 | | 131 | 70-130 | | | B+ |
| Tetrachloroethene | 0.0463 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |
| Tetrahydrofuran | 0.0625 | 0.0200 | mg/kg wet | 0.05000 | | 125 | 70-130 | | | |
| Toluene | 0.0547 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | | | |
| trans-1,2-Dichloroethene | 0.0585 | 0.0050 | mg/kg wet | 0.05000 | | 117 | 70-130 | | | |
| trans-1,3-Dichloropropene | 0.0559 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | | | |
| Trichloroethene | 0.0526 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| Trichlorofluoromethane | 0.0540 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 40-160 | | | |
| Vinyl Chloride | 0.0535 | 0.0100 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| Xylene O | 0.0568 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | | | |
| Xylene P,M | 0.113 | 0.0100 | mg/kg wet | 0.1000 | | 113 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0485* | | mg/kg wet | *0.05000* | | *97* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0501* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0508* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0507* | | mg/kg wet | *0.05000* | | *101* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 0.6 | 20 | |
| 1,1,1-Trichloroethane | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 0.3 | 20 | |
| 1,1,2,2-Tetrachloroethane | 0.0603 | 0.0050 | mg/kg wet | 0.05000 | | 121 | 40-160 | 14 | 20 | |
| 1,1,2-Trichloroethane | 0.0525 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 2 | 20 | |
| 1,1-Dichloroethane | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 0.9 | 20 | |
| 1,1-Dichloroethene | 0.0628 | 0.0050 | mg/kg wet | 0.05000 | | 126 | 70-130 | 0.6 | 20 | |
| 1,1-Dichloropropene | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 0.3 | 20 | |
| 1,2,3-Trichlorobenzene | 0.0587 | 0.0050 | mg/kg wet | 0.05000 | | 117 | 70-130 | 11 | 20 | |
| 1,2,3-Trichloropropane | 0.0573 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | 13 | 20 | |
| 1,2,4-Trichlorobenzene | 0.0604 | 0.0050 | mg/kg wet | 0.05000 | | 121 | 70-130 | 12 | 20 | |
| 1,2,4-Trimethylbenzene | 0.0651 | 0.0050 | mg/kg wet | 0.05000 | | 130 | 70-130 | 11 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 0.0554 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | 17 | 20 | |
| 1,2-Dibromoethane | 0.0554 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | 2 | 20 | |
| 1,2-Dichlorobenzene | 0.0575 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | 11 | 20 | |
| 1,2-Dichloroethane | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 2 | 20 | |
| 1,2-Dichloropropane | 0.0547 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 1 | 20 | |
| 1,3,5-Trimethylbenzene | 0.0650 | 0.0050 | mg/kg wet | 0.05000 | | 130 | 70-130 | 12 | 20 | |
| 1,3-Dichlorobenzene | 0.0580 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | 11 | 20 | |
| 1,3-Dichloropropane | 0.0559 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 0.2 | 20 | |
| 1,4-Dichlorobenzene | 0.0565 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | 11 | 20 | |
| 1,4-Dioxane | 1.33 | 0.100 | mg/kg wet | 1.000 | | 133 | 70-130 | 3 | 20 | B+ |
| 2,2-Dichloropropane | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 0.3 | 20 | |
| 2-Butanone | 0.246 | 0.0500 | mg/kg wet | 0.2500 | | 98 | 40-160 | 2 | 20 | |
| 2-Chlorotoluene | 0.0635 | 0.0050 | mg/kg wet | 0.05000 | | 127 | 70-130 | 13 | 20 | |
| 2-Hexanone | 0.242 | 0.0500 | mg/kg wet | 0.2500 | | 97 | 40-160 | 2 | 20 | |
| 4-Chlorotoluene | 0.0620 | 0.0050 | mg/kg wet | 0.05000 | | 124 | 70-130 | 11 | 20 | |
| 4-Isopropyltoluene | 0.0600 | 0.0050 | mg/kg wet | 0.05000 | | 120 | 70-130 | 12 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40319 - 5035** | | | | | | | | | | |
| 4-Methyl-2-Pentanone | 0.259 | 0.0500 | mg/kg wet | 0.2500 | | 104 | 40-160 | 2 | 20 | |
| Acetone | 0.232 | 0.0500 | mg/kg wet | 0.2500 | | 93 | 40-160 | 11 | 20 | |
| Benzene | 0.0551 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 2 | 20 | |
| Bromobenzene | 0.0625 | 0.0050 | mg/kg wet | 0.05000 | | 125 | 70-130 | 12 | 20 | |
| Bromochloromethane | 0.0551 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 0.07 | 20 | |
| Bromodichloromethane | 0.0544 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 2 | 20 | |
| Bromoform | 0.0472 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 40-160 | 1 | 20 | |
| Bromomethane | 0.0605 | 0.0100 | mg/kg wet | 0.05000 | | 121 | 40-160 | 0.6 | 20 | |
| Carbon Disulfide | 0.0650 | 0.0050 | mg/kg wet | 0.05000 | | 130 | 70-130 | 0.5 | 20 | |
| Carbon Tetrachloride | 0.0500 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 1 | 20 | |
| Chlorobenzene | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 0.4 | 20 | |
| Chloroethane | 0.0590 | 0.0100 | mg/kg wet | 0.05000 | | 118 | 40-160 | 0.7 | 20 | |
| Chloroform | 0.0520 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 0.7 | 20 | |
| Chloromethane | 0.0553 | 0.0100 | mg/kg wet | 0.05000 | | 111 | 40-160 | 2 | 20 | |
| cis-1,2-Dichloroethene | 0.0577 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | 0.3 | 20 | |
| cis-1,3-Dichloropropene | 0.0588 | 0.0050 | mg/kg wet | 0.05000 | | 118 | 40-160 | 2 | 20 | |
| Dibromochloromethane | 0.0528 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 40-160 | 0.4 | 20 | |
| Dibromomethane | 0.0538 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 2 | 20 | |
| Dichlorodifluoromethane | 0.0331 | 0.0100 | mg/kg wet | 0.05000 | | 66 | 40-160 | 0.3 | 20 | |
| Diethyl Ether | 0.0660 | 0.0050 | mg/kg wet | 0.05000 | | 132 | 70-130 | 1 | 20 | B+ |
| Di-isopropyl ether | 0.0603 | 0.0050 | mg/kg wet | 0.05000 | | 121 | 70-130 | 2 | 20 | |
| Ethyl tertiary-butyl ether | 0.0636 | 0.0050 | mg/kg wet | 0.05000 | | 127 | 70-130 | 2 | 20 | |
| Ethylbenzene | 0.0567 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | 0.4 | 20 | |
| Hexachlorobutadiene | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 40-160 | 12 | 20 | |
| Isopropylbenzene | 0.0741 | 0.0050 | mg/kg wet | 0.05000 | | 148 | 70-130 | 12 | 20 | B+ |
| Methyl tert-Butyl Ether | 0.0606 | 0.0050 | mg/kg wet | 0.05000 | | 121 | 70-130 | 0.7 | 20 | |
| Methylene Chloride | 0.0613 | 0.0250 | mg/kg wet | 0.05000 | | 123 | 70-130 | 2 | 20 | |
| Naphthalene | 0.0632 | 0.0050 | mg/kg wet | 0.05000 | | 126 | 40-160 | 14 | 20 | |
| n-Butylbenzene | 0.0637 | 0.0050 | mg/kg wet | 0.05000 | | 127 | 70-130 | 13 | 20 | |
| n-Propylbenzene | 0.0645 | 0.0050 | mg/kg wet | 0.05000 | | 129 | 70-130 | 12 | 20 | |
| sec-Butylbenzene | 0.0601 | 0.0050 | mg/kg wet | 0.05000 | | 120 | 70-130 | 13 | 20 | |
| Styrene | 0.0557 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 40-160 | 1 | 20 | |
| tert-Butylbenzene | 0.0653 | 0.0050 | mg/kg wet | 0.05000 | | 131 | 70-130 | 13 | 20 | B+ |
| Tertiary-amyl methyl ether | 0.0644 | 0.0050 | mg/kg wet | 0.05000 | | 129 | 70-130 | 2 | 20 | |
| Tetrachloroethene | 0.0460 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 0.8 | 20 | |
| Tetrahydrofuran | 0.0657 | 0.0200 | mg/kg wet | 0.05000 | | 131 | 70-130 | 5 | 20 | B+ |
| Toluene | 0.0540 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 1 | 20 | |
| trans-1,2-Dichloroethene | 0.0586 | 0.0050 | mg/kg wet | 0.05000 | | 117 | 70-130 | 0.1 | 20 | |
| trans-1,3-Dichloropropene | 0.0552 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 1 | 20 | |
| Trichloroethene | 0.0528 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 0.4 | 20 | |
| Trichlorofluoromethane | 0.0541 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 40-160 | 0.2 | 20 | |
| Vinyl Chloride | 0.0536 | 0.0100 | mg/kg wet | 0.05000 | | 107 | 70-130 | 0.3 | 20 | |
| Xylene O | 0.0564 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | 0.7 | 20 | |
| Xylene P,M | 0.113 | 0.0100 | mg/kg wet | 0.1000 | | 113 | 70-130 | 0.1 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0476* | | mg/kg wet | *0.05000* | | *95* | *70-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40319 - 5035** | | | | | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0472* | | mg/kg wet | *0.05000* | | *94* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0500* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0511* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DG40242 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DG40242 - 3546** | | | | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyridine | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.40* | | mg/kg wet | *2.500* | | *96* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.69* | | mg/kg wet | *3.750* | | *98* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.66* | | mg/kg wet | *3.750* | | *98* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.18* | | mg/kg wet | *2.500* | | *87* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.16* | | mg/kg wet | *3.750* | | *84* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.28* | | mg/kg wet | *2.500* | | *91* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.44* | | mg/kg wet | *3.750* | | *92* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.51* | | mg/kg wet | *2.500* | | *100* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.37 | 0.025 | mg/kg wet | 2.500 | | 95 | 40-140 | 200 | 30 | |
| 1,2,4-Trichlorobenzene | 2.03 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | 200 | 30 | |
| 1,2-Dichlorobenzene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 200 | 30 | |
| 1,3-Dichlorobenzene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 200 | 30 | |
| 1,4-Dichlorobenzene | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 200 | 30 | |
| 2,4,5-Trichlorophenol | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 30-130 | 200 | 30 | |
| 2,4,6-Trichlorophenol | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 30-130 | 200 | 30 | |
| 2,4-Dichlorophenol | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 30-130 | 200 | 30 | |
| 2,4-Dimethylphenol | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 30-130 | 200 | 30 | |
| 2,4-Dinitrophenol | 1.95 | 1.00 | mg/kg wet | 2.500 | | 78 | 15-140 | 200 | 30 | |
| 2,4-Dinitrotoluene | 2.64 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 200 | 30 | |
| 2,6-Dinitrotoluene | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | 200 | 30 | |
| 2-Chloronaphthalene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 200 | 30 | |
| 2-Chlorophenol | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 30-130 | 200 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DG40242 - 3546** | | | | | | | | | | |
| 2-Methylnaphthalene | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 200 | 30 | |
| 2-Methylphenol | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 15-140 | 200 | 30 | |
| 2-Nitrophenol | 2.16 | 0.500 | mg/kg wet | 2.500 | | 86 | 30-130 | 200 | 30 | |
| 3,3´-Dichlorobenzidine | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 200 | 30 | |
| 3+4-Methylphenol | 4.68 | 0.250 | mg/kg wet | 5.000 | | 94 | 15-140 | 200 | 30 | |
| 4-Bromophenyl-phenylether | 2.34 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 200 | 30 | |
| 4-Chloroaniline | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 15-140 | 200 | 30 | |
| 4-Nitrophenol | 1.49 | 1.00 | mg/kg wet | 2.500 | | 60 | 15-140 | 200 | 30 | |
| Acenaphthene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 200 | 30 | |
| Acenaphthylene | 2.36 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 200 | 30 | |
| Acetophenone | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 200 | 30 | |
| Aniline | 1.60 | 0.250 | mg/kg wet | 2.500 | | 64 | 40-140 | 200 | 30 | |
| Anthracene | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 200 | 30 | |
| Azobenzene | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 200 | 30 | |
| Benzo(a)anthracene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 200 | 30 | |
| Benzo(a)pyrene | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 200 | 30 | |
| Benzo(b)fluoranthene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 200 | 30 | |
| Benzo(g,h,i)perylene | 2.84 | 0.250 | mg/kg wet | 2.500 | | 114 | 40-140 | 200 | 30 | |
| Benzo(k)fluoranthene | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 200 | 30 | |
| bis(2-Chloroethoxy)methane | 1.87 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | 200 | 30 | |
| bis(2-Chloroethyl)ether | 2.19 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 200 | 30 | |
| bis(2-chloroisopropyl)Ether | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 200 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 200 | 30 | |
| Butylbenzylphthalate | 2.84 | 0.250 | mg/kg wet | 2.500 | | 113 | 40-140 | 200 | 30 | |
| Chrysene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 200 | 30 | |
| Dibenzo(a,h)Anthracene | 2.76 | 0.250 | mg/kg wet | 2.500 | | 111 | 40-140 | 200 | 30 | |
| Dibenzofuran | 2.36 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 200 | 30 | |
| Diethylphthalate | 2.61 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | 200 | 30 | |
| Dimethylphthalate | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 15-140 | 200 | 30 | |
| Di-n-butylphthalate | 2.75 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | 200 | 30 | |
| Di-n-octylphthalate | 2.81 | 0.500 | mg/kg wet | 2.500 | | 112 | 40-140 | 200 | 30 | |
| Fluoranthene | 2.64 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 200 | 30 | |
| Fluorene | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 200 | 30 | |
| Hexachlorobenzene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 200 | 30 | |
| Hexachlorobutadiene | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 200 | 30 | |
| Hexachloroethane | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 200 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 200 | 30 | |
| Isophorone | 2.09 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 200 | 30 | |
| Naphthalene | 2.02 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | 200 | 30 | |
| Nitrobenzene | 1.98 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | 200 | 30 | |
| N-Nitrosodimethylamine | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 200 | 30 | |
| Pentachlorophenol | 1.94 | 1.00 | mg/kg wet | 2.500 | | 78 | 15-140 | 200 | 30 | |
| Phenanthrene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 200 | 30 | |
| Phenol | 2.01 | 0.250 | mg/kg wet | 2.500 | | 80 | 15-140 | 200 | 30 | |
| Pyrene | 2.72 | 0.250 | mg/kg wet | 2.500 | | 109 | 40-140 | 200 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DG40242 - 3546** | | | | | | | | | | |
| Pyridine | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | 200 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.31* | | mg/kg wet | *2.500* | | *92* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.43* | | mg/kg wet | *3.750* | | *91* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.60* | | mg/kg wet | *3.750* | | *96* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.25* | | mg/kg wet | *2.500* | | *90* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.77* | | mg/kg wet | *3.750* | | *74* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.08* | | mg/kg wet | *2.500* | | *83* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.58* | | mg/kg wet | *3.750* | | *96* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.50* | | mg/kg wet | *2.500* | | *100* | *30-130* | | | |
| **Batch DG40304 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DG40304 - 3546** | | | | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyridine | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.30* | | mg/kg wet | *2.500* | | *92* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.79* | | mg/kg wet | *3.750* | | *101* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.41* | | mg/kg wet | *3.750* | | *91* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *1.95* | | mg/kg wet | *2.500* | | *78* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.36* | | mg/kg wet | *3.750* | | *63* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.21* | | mg/kg wet | *2.500* | | *88* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.11* | | mg/kg wet | *3.750* | | *83* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.40* | | mg/kg wet | *2.500* | | *96* | *30-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.19 | 0.025 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 1.97 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| 1,2-Dichlorobenzene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| 1,3-Dichlorobenzene | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 30-130 | | | |
| 2,4-Dichlorophenol | 1.85 | 0.250 | mg/kg wet | 2.500 | | 74 | 30-130 | | | |
| 2,4-Dimethylphenol | 1.96 | 0.250 | mg/kg wet | 2.500 | | 79 | 30-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DG40304 - 3546** | | | | | | | | | | |
| 2,4-Dinitrophenol | 1.73 | 1.00 | mg/kg wet | 2.500 | | 69 | 15-140 | | | |
| 2,4-Dinitrotoluene | 2.34 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| 2-Chloronaphthalene | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| 2-Chlorophenol | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | | | |
| 2-Methylnaphthalene | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 40-140 | | | |
| 2-Methylphenol | 1.98 | 0.250 | mg/kg wet | 2.500 | | 79 | 15-140 | | | |
| 2-Nitrophenol | 1.96 | 0.500 | mg/kg wet | 2.500 | | 78 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.19 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| 3+4-Methylphenol | 4.15 | 0.250 | mg/kg wet | 5.000 | | 83 | 15-140 | | | |
| 4-Bromophenyl-phenylether | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| 4-Chloroaniline | 1.77 | 0.250 | mg/kg wet | 2.500 | | 71 | 15-140 | | | |
| 4-Nitrophenol | 1.01 | 1.00 | mg/kg wet | 2.500 | | 40 | 15-140 | | | |
| Acenaphthene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Acenaphthylene | 2.14 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Acetophenone | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Aniline | 1.23 | 0.250 | mg/kg wet | 2.500 | | 49 | 40-140 | | | |
| Anthracene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Azobenzene | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Benzo(a)anthracene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Benzo(a)pyrene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 1.67 | 0.250 | mg/kg wet | 2.500 | | 67 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 2.02 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Butylbenzylphthalate | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Chrysene | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Dibenzofuran | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Diethylphthalate | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Dimethylphthalate | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 15-140 | | | |
| Di-n-butylphthalate | 2.34 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Di-n-octylphthalate | 2.43 | 0.500 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Fluoranthene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Fluorene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Hexachlorobenzene | 2.14 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Hexachlorobutadiene | 1.87 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| Hexachloroethane | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Isophorone | 1.85 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| Naphthalene | 1.85 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| Nitrobenzene | 1.75 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DG40304 - 3546** | | | | | | | | | | |
| N-Nitrosodimethylamine | 2.60 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Pentachlorophenol | 1.81 | 1.00 | mg/kg wet | 2.500 | | 72 | 15-140 | | | |
| Phenanthrene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Phenol | 1.55 | 0.250 | mg/kg wet | 2.500 | | 62 | 15-140 | | | |
| Pyrene | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Pyridine | 1.70 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.23* | | mg/kg wet | *2.500* | | *89* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.19* | | mg/kg wet | *3.750* | | *85* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.34* | | mg/kg wet | *3.750* | | *89* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.16* | | mg/kg wet | *2.500* | | *86* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.21* | | mg/kg wet | *3.750* | | *59* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.00* | | mg/kg wet | *2.500* | | *80* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.29* | | mg/kg wet | *3.750* | | *88* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.25* | | mg/kg wet | *2.500* | | *90* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.14 | 0.025 | mg/kg wet | 2.500 | | 86 | 40-140 | 3 | 30 | |
| 1,2,4-Trichlorobenzene | 1.86 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | 6 | 30 | |
| 1,2-Dichlorobenzene | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 4 | 30 | |
| 1,3-Dichlorobenzene | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | 2 | 30 | |
| 1,4-Dichlorobenzene | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 4 | 30 | |
| 2,4,5-Trichlorophenol | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 30-130 | 4 | 30 | |
| 2,4,6-Trichlorophenol | 1.82 | 0.250 | mg/kg wet | 2.500 | | 73 | 30-130 | 5 | 30 | |
| 2,4-Dichlorophenol | 1.76 | 0.250 | mg/kg wet | 2.500 | | 70 | 30-130 | 5 | 30 | |
| 2,4-Dimethylphenol | 1.86 | 0.250 | mg/kg wet | 2.500 | | 75 | 30-130 | 5 | 30 | |
| 2,4-Dinitrophenol | 1.93 | 1.00 | mg/kg wet | 2.500 | | 77 | 15-140 | 11 | 30 | |
| 2,4-Dinitrotoluene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 4 | 30 | |
| 2,6-Dinitrotoluene | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 3 | 30 | |
| 2-Chloronaphthalene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 4 | 30 | |
| 2-Chlorophenol | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 30-130 | 3 | 30 | |
| 2-Methylnaphthalene | 1.76 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | 4 | 30 | |
| 2-Methylphenol | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 15-140 | 2 | 30 | |
| 2-Nitrophenol | 1.85 | 0.500 | mg/kg wet | 2.500 | | 74 | 30-130 | 6 | 30 | |
| 3,3´-Dichlorobenzidine | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 6 | 30 | |
| 3+4-Methylphenol | 4.12 | 0.250 | mg/kg wet | 5.000 | | 82 | 15-140 | 0.7 | 30 | |
| 4-Bromophenyl-phenylether | 1.99 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 4 | 30 | |
| 4-Chloroaniline | 1.67 | 0.250 | mg/kg wet | 2.500 | | 67 | 15-140 | 6 | 30 | |
| 4-Nitrophenol | 1.67 | 1.00 | mg/kg wet | 2.500 | | 67 | 15-140 | 49 | 30 | D+ |
| Acenaphthene | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 1 | 30 | |
| Acenaphthylene | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 3 | 30 | |
| Acetophenone | 2.06 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 1 | 30 | |
| Aniline | 1.16 | 0.250 | mg/kg wet | 2.500 | | 46 | 40-140 | 6 | 30 | |
| Anthracene | 2.14 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 4 | 30 | |
| Azobenzene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 6 | 30 | |
| Benzo(a)anthracene | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 5 | 30 | |
| Benzo(a)pyrene | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 4 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DG40304 - 3546** | | | | | | | | | | |
| Benzo(b)fluoranthene | 2.06 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 3 | 30 | |
| Benzo(g,h,i)perylene | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 2 | 30 | |
| Benzo(k)fluoranthene | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 4 | 30 | |
| bis(2-Chloroethoxy)methane | 1.61 | 0.250 | mg/kg wet | 2.500 | | 64 | 40-140 | 4 | 30 | |
| bis(2-Chloroethyl)ether | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 1 | 30 | |
| bis(2-chloroisopropyl)Ether | 1.81 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | 8 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | 6 | 30 | |
| Butylbenzylphthalate | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 6 | 30 | |
| Chrysene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 5 | 30 | |
| Dibenzo(a,h)Anthracene | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 8 | 30 | |
| Dibenzofuran | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 5 | 30 | |
| Diethylphthalate | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 4 | 30 | |
| Dimethylphthalate | 2.16 | 0.250 | mg/kg wet | 2.500 | | 87 | 15-140 | 2 | 30 | |
| Di-n-butylphthalate | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 6 | 30 | |
| Di-n-octylphthalate | 2.29 | 0.500 | mg/kg wet | 2.500 | | 92 | 40-140 | 6 | 30 | |
| Fluoranthene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 3 | 30 | |
| Fluorene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 5 | 30 | |
| Hexachlorobenzene | 2.02 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | 5 | 30 | |
| Hexachlorobutadiene | 1.82 | 0.250 | mg/kg wet | 2.500 | | 73 | 40-140 | 3 | 30 | |
| Hexachloroethane | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 5 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.19 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 3 | 30 | |
| Isophorone | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | 3 | 30 | |
| Naphthalene | 1.79 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | 3 | 30 | |
| Nitrobenzene | 1.75 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | 0.08 | 30 | |
| N-Nitrosodimethylamine | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 8 | 30 | |
| Pentachlorophenol | 1.66 | 1.00 | mg/kg wet | 2.500 | | 67 | 15-140 | 8 | 30 | |
| Phenanthrene | 1.99 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 5 | 30 | |
| Phenol | 1.48 | 0.250 | mg/kg wet | 2.500 | | 59 | 15-140 | 5 | 30 | |
| Pyrene | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 3 | 30 | |
| Pyridine | 1.63 | 0.250 | mg/kg wet | 2.500 | | 65 | 40-140 | 5 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.08* | | mg/kg wet | *2.500* | | *83* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.01* | | mg/kg wet | *3.750* | | *80* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.27* | | mg/kg wet | *3.750* | | *87* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.03* | | mg/kg wet | *2.500* | | *81* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.07* | | mg/kg wet | *3.750* | | *55* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.88* | | mg/kg wet | *2.500* | | *75* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.06* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.10* | | mg/kg wet | *2.500* | | *84* | *30-130* | | | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DG40207 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.02 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DG40207 - 3540C** | | | | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0230* | | mg/kg wet | *0.02500* | | *92* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0224* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0194* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 89 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 84 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 92 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0245* | | mg/kg wet | *0.02500* | | *98* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0233* | | mg/kg wet | *0.02500* | | *93* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0199* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 93 | 40-140 | 4 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 88 | 40-140 | 4 | 30 | |
| Aroclor 1260 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 96 | 40-140 | 2 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 94 | 40-140 | 2 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0246* | | mg/kg wet | *0.02500* | | *98* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0235* | | mg/kg wet | *0.02500* | | *94* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0218* | | mg/kg wet | *0.02500* | | *87* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0212* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DG40303 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 4,4´-DDD | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDD [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DG40303 - 3546** | | | | | | | | | | |
| 4,4´-DDT | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Chlordane (Total) | ND | 0.0200 | mg/kg wet | | | | | | | |
| Chlordane (Total) [2C] | ND | 0.0200 | mg/kg wet | | | | | | | |
| delta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| delta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) [2C] | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Toxaphene | ND | 0.125 | mg/kg wet | | | | | | | |
| Toxaphene [2C] | ND | 0.125 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0115* | | mg/kg wet | *0.01250* | | *92* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0109* | | mg/kg wet | *0.01250* | | *87* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0127* | | mg/kg wet | *0.01250* | | *101* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0113* | | mg/kg wet | *0.01250* | | *90* | *30-150* | | | |
| **LCS** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DG40303 - 3546** | | | | | | | | | | |
| 4,4´-DDD | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | | | |
| 4,4´-DDD [2C] | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| 4,4´-DDE | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| 4,4´-DDE [2C] | 0.0122 | 0.0025 | mg/kg wet | 0.01250 | | 97 | 40-140 | | | |
| 4,4´-DDT | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| 4,4´-DDT [2C] | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | | | |
| Aldrin | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Aldrin [2C] | 0.0121 | 0.0025 | mg/kg wet | 0.01250 | | 97 | 40-140 | | | |
| alpha-BHC | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| alpha-BHC [2C] | 0.0124 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | | | |
| alpha-Chlordane | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | | | |
| alpha-Chlordane [2C] | 0.0115 | 0.0025 | mg/kg wet | 0.01250 | | 92 | 40-140 | | | |
| beta-BHC | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| beta-BHC [2C] | 0.0117 | 0.0025 | mg/kg wet | 0.01250 | | 93 | 40-140 | | | |
| delta-BHC | 0.0103 | 0.0025 | mg/kg wet | 0.01250 | | 82 | 40-140 | | | |
| delta-BHC [2C] | 0.0101 | 0.0025 | mg/kg wet | 0.01250 | | 81 | 40-140 | | | |
| Dieldrin | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |
| Dieldrin [2C] | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | | | |
| Endosulfan I | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | | | |
| Endosulfan I [2C] | 0.0117 | 0.0025 | mg/kg wet | 0.01250 | | 93 | 40-140 | | | |
| Endosulfan II | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| Endosulfan II [2C] | 0.0122 | 0.0025 | mg/kg wet | 0.01250 | | 98 | 40-140 | | | |
| Endosulfan Sulfate | 0.0123 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | | | |
| Endosulfan Sulfate [2C] | 0.0116 | 0.0025 | mg/kg wet | 0.01250 | | 93 | 40-140 | | | |
| Endrin | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| Endrin [2C] | 0.0123 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | | | |
| Endrin Ketone | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| Endrin Ketone [2C] | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | | | |
| gamma-BHC (Lindane) | 0.0129 | 0.0015 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| gamma-BHC (Lindane) [2C] | 0.0122 | 0.0015 | mg/kg wet | 0.01250 | | 98 | 40-140 | | | |
| gamma-Chlordane | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | | | |
| gamma-Chlordane [2C] | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| Heptachlor | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Heptachlor [2C] | 0.0122 | 0.0025 | mg/kg wet | 0.01250 | | 98 | 40-140 | | | |
| Heptachlor Epoxide | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Heptachlor Epoxide [2C] | 0.0120 | 0.0025 | mg/kg wet | 0.01250 | | 96 | 40-140 | | | |
| Hexachlorobenzene | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | | | |
| Hexachlorobenzene [2C] | 0.0114 | 0.0025 | mg/kg wet | 0.01250 | | 91 | 40-140 | | | |
| Methoxychlor | 0.0123 | 0.0025 | mg/kg wet | 0.01250 | | 98 | 40-140 | | | |
| Methoxychlor [2C] | 0.0113 | 0.0025 | mg/kg wet | 0.01250 | | 91 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0125* | | mg/kg wet | *0.01250* | | *100* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0117* | | mg/kg wet | *0.01250* | | *93* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0129* | | mg/kg wet | *0.01250* | | *103* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0118* | | mg/kg wet | *0.01250* | | *95* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DG40303 - 3546** | | | | | | | | | | |
| 4,4´-DDD | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 2 | 30 | |
| 4,4´-DDD [2C] | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 2 | 30 | |
| 4,4´-DDE | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 3 | 30 | |
| 4,4´-DDE [2C] | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | 3 | 30 | |
| 4,4´-DDT | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | 1 | 30 | |
| 4,4´-DDT [2C] | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | 1 | 30 | |
| Aldrin | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 4 | 30 | |
| Aldrin [2C] | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | 4 | 30 | |
| alpha-BHC | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 3 | 30 | |
| alpha-BHC [2C] | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 4 | 30 | |
| alpha-Chlordane | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 3 | 30 | |
| alpha-Chlordane [2C] | 0.0120 | 0.0025 | mg/kg wet | 0.01250 | | 96 | 40-140 | 5 | 30 | |
| beta-BHC | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 3 | 30 | |
| beta-BHC [2C] | 0.0123 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | 6 | 30 | |
| delta-BHC | 0.0105 | 0.0025 | mg/kg wet | 0.01250 | | 84 | 40-140 | 3 | 30 | |
| delta-BHC [2C] | 0.0104 | 0.0025 | mg/kg wet | 0.01250 | | 83 | 40-140 | 3 | 30 | |
| Dieldrin | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 3 | 30 | |
| Dieldrin [2C] | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | 4 | 30 | |
| Endosulfan I | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 3 | 30 | |
| Endosulfan I [2C] | 0.0121 | 0.0025 | mg/kg wet | 0.01250 | | 97 | 40-140 | 4 | 30 | |
| Endosulfan II | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 3 | 30 | |
| Endosulfan II [2C] | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | 3 | 30 | |
| Endosulfan Sulfate | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | 2 | 30 | |
| Endosulfan Sulfate [2C] | 0.0118 | 0.0025 | mg/kg wet | 0.01250 | | 95 | 40-140 | 2 | 30 | |
| Endrin | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | 2 | 30 | |
| Endrin [2C] | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | 3 | 30 | |
| Endrin Ketone | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 1 | 30 | |
| Endrin Ketone [2C] | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | 0.9 | 30 | |
| gamma-BHC (Lindane) | 0.0133 | 0.0015 | mg/kg wet | 0.01250 | | 107 | 40-140 | 3 | 30 | |
| gamma-BHC (Lindane) [2C] | 0.0127 | 0.0015 | mg/kg wet | 0.01250 | | 102 | 40-140 | 4 | 30 | |
| gamma-Chlordane | 0.0150 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | 3 | 30 | |
| gamma-Chlordane [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 4 | 30 | |
| Heptachlor | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | 3 | 30 | |
| Heptachlor [2C] | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | 3 | 30 | |
| Heptachlor Epoxide | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 3 | 30 | |
| Heptachlor Epoxide [2C] | 0.0124 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | 4 | 30 | |
| Hexachlorobenzene | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 3 | 30 | |
| Hexachlorobenzene [2C] | 0.0117 | 0.0025 | mg/kg wet | 0.01250 | | 93 | 40-140 | 3 | 30 | |
| Methoxychlor | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | 2 | 30 | |
| Methoxychlor [2C] | 0.0114 | 0.0025 | mg/kg wet | 0.01250 | | 91 | 40-140 | 0.7 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0120* | | mg/kg wet | *0.01250* | | *96* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0113* | | mg/kg wet | *0.01250* | | *91* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0124* | | mg/kg wet | *0.01250* | | *100* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0116* | | mg/kg wet | *0.01250* | | *93* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DG40831 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 2,4,5-T | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-T [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4-D | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-D [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-DB | ND | 0.048 | mg/kg wet | | | | | | | |
| 2,4-DB [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| Dalapon | ND | 0.046 | mg/kg wet | | | | | | | |
| Dalapon [2C] | ND | 0.046 | mg/kg wet | | | | | | | |
| Dicamba | ND | 0.009 | mg/kg wet | | | | | | | |
| Dicamba [2C] | ND | 0.009 | mg/kg wet | | | | | | | |
| Dichlorprop | ND | 0.047 | mg/kg wet | | | | | | | |
| Dichlorprop [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| Dinoseb | ND | 0.048 | mg/kg wet | | | | | | | |
| Dinoseb [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| MCPA | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPA [2C] | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPP | ND | 2.35 | mg/kg wet | | | | | | | |
| MCPP [2C] | ND | 2.35 | mg/kg wet | | | | | | | |
| *Surrogate: DCAA* | *0.172* | | mg/kg wet | *0.2000* | | *86* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.164* | | mg/kg wet | *0.2000* | | *82* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 2,4,5-T | 0.017 | 0.010 | mg/kg wet | 0.01900 | | 90 | 40-140 | | | |
| 2,4,5-T [2C] | 0.017 | 0.010 | mg/kg wet | 0.01900 | | 90 | 40-140 | | | |
| 2,4,5-TP (Silvex) | 0.017 | 0.010 | mg/kg wet | 0.01900 | | 92 | 40-140 | | | |
| 2,4,5-TP (Silvex) [2C] | 0.018 | 0.010 | mg/kg wet | 0.01900 | | 96 | 40-140 | | | |
| 2,4-D | 0.184 | 0.047 | mg/kg wet | 0.1880 | | 98 | 40-140 | | | |
| 2,4-D [2C] | 0.162 | 0.047 | mg/kg wet | 0.1880 | | 86 | 40-140 | | | |
| 2,4-DB | 0.217 | 0.048 | mg/kg wet | 0.1900 | | 114 | 40-140 | | | |
| 2,4-DB [2C] | 0.196 | 0.048 | mg/kg wet | 0.1900 | | 103 | 40-140 | | | |
| Dalapon | 0.361 | 0.046 | mg/kg wet | 0.4550 | | 79 | 40-140 | | | |
| Dalapon [2C] | 0.403 | 0.046 | mg/kg wet | 0.4550 | | 89 | 40-140 | | | |
| Dicamba | 0.015 | 0.009 | mg/kg wet | 0.01880 | | 78 | 40-140 | | | |
| Dicamba [2C] | 0.018 | 0.009 | mg/kg wet | 0.01880 | | 94 | 40-140 | | | |
| Dichlorprop | 0.231 | 0.047 | mg/kg wet | 0.1880 | | 123 | 40-140 | | | |
| Dichlorprop [2C] | 0.189 | 0.047 | mg/kg wet | 0.1880 | | 100 | 40-140 | | | |
| Dinoseb | 0.021 | 0.048 | mg/kg wet | 0.09500 | | 22 | 10-100 | | | |
| Dinoseb [2C] | 0.022 | 0.048 | mg/kg wet | 0.09500 | | 23 | 10-100 | | | |
| MCPA | 19.9 | 2.32 | mg/kg wet | 18.60 | | 107 | 40-140 | | | |
| MCPA [2C] | 20.4 | 2.32 | mg/kg wet | 18.60 | | 110 | 40-140 | | | |
| MCPP | 22.1 | 2.35 | mg/kg wet | 18.80 | | 118 | 40-140 | | | |
| MCPP [2C] | 21.0 | 2.35 | mg/kg wet | 18.80 | | 112 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DG40831 - 3546** | | | | | | | | | | |
| *Surrogate: DCAA* | *0.200* | | mg/kg wet | *0.2000* | | *100* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.185* | | mg/kg wet | *0.2000* | | *92* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 2,4,5-T | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 84 | 40-140 | 7 | 30 | |
| 2,4,5-T [2C] | 0.017 | 0.010 | mg/kg wet | 0.01900 | | 88 | 40-140 | 2 | 30 | |
| 2,4,5-TP (Silvex) | 0.017 | 0.010 | mg/kg wet | 0.01900 | | 88 | 40-140 | 4 | 30 | |
| 2,4,5-TP (Silvex) [2C] | 0.017 | 0.010 | mg/kg wet | 0.01900 | | 90 | 40-140 | 6 | 30 | |
| 2,4-D | 0.171 | 0.047 | mg/kg wet | 0.1880 | | 91 | 40-140 | 7 | 30 | |
| 2,4-D [2C] | 0.160 | 0.047 | mg/kg wet | 0.1880 | | 85 | 40-140 | 1 | 30 | |
| 2,4-DB | 0.206 | 0.048 | mg/kg wet | 0.1900 | | 108 | 40-140 | 6 | 30 | |
| 2,4-DB [2C] | 0.194 | 0.048 | mg/kg wet | 0.1900 | | 102 | 40-140 | 1 | 30 | |
| Dalapon | 0.328 | 0.046 | mg/kg wet | 0.4550 | | 72 | 40-140 | 10 | 30 | |
| Dalapon [2C] | 0.387 | 0.046 | mg/kg wet | 0.4550 | | 85 | 40-140 | 4 | 30 | |
| Dicamba | 0.014 | 0.009 | mg/kg wet | 0.01880 | | 74 | 40-140 | 5 | 30 | |
| Dicamba [2C] | 0.017 | 0.009 | mg/kg wet | 0.01880 | | 88 | 40-140 | 7 | 30 | |
| Dichlorprop | 0.206 | 0.047 | mg/kg wet | 0.1880 | | 110 | 40-140 | 11 | 30 | |
| Dichlorprop [2C] | 0.182 | 0.047 | mg/kg wet | 0.1880 | | 97 | 40-140 | 3 | 30 | |
| Dinoseb | 0.021 | 0.048 | mg/kg wet | 0.09500 | | 22 | 10-100 | 2 | 30 | |
| Dinoseb [2C] | 0.022 | 0.048 | mg/kg wet | 0.09500 | | 23 | 10-100 | 2 | 30 | |
| MCPA | 17.8 | 2.32 | mg/kg wet | 18.60 | | 96 | 40-140 | 11 | 30 | |
| MCPA [2C] | 19.2 | 2.32 | mg/kg wet | 18.60 | | 103 | 40-140 | 6 | 30 | |
| MCPP | 19.7 | 2.35 | mg/kg wet | 18.80 | | 105 | 40-140 | 12 | 30 | |
| MCPP [2C] | 20.2 | 2.35 | mg/kg wet | 18.80 | | 107 | 40-140 | 4 | 30 | |
| *Surrogate: DCAA* | *0.175* | | mg/kg wet | *0.2000* | | *87* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.168* | | mg/kg wet | *0.2000* | | *84* | *30-150* | | | |
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DG40305 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *3.93* | | mg/kg wet | *5.000* | | *79* | *40-140* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DG40305 - 3546** | | | | | | | | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.7 | 0.2 | mg/kg wet | 2.500 | | 69 | 40-140 | | | |
| Docosane (C22) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Dodecane (C12) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| Eicosane (C20) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Hexacosane (C26) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Hexadecane (C16) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| Nonadecane (C19) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Nonane (C9) | 1.5 | 0.2 | mg/kg wet | 2.500 | | 61 | 30-140 | | | |
| Octacosane (C28) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Octadecane (C18) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Tetracosane (C24) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Tetradecane (C14) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 28.9 | 10.0 | mg/kg wet | 35.00 | | 82 | 40-140 | | | |
| Triacontane (C30) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *3.96* | | mg/kg wet | *5.000* | | *79* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | 4 | 25 | |
| Docosane (C22) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 1 | 25 | |
| Dodecane (C12) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 4 | 25 | |
| Eicosane (C20) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 2 | 25 | |
| Hexacosane (C26) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | 1 | 25 | |
| Hexadecane (C16) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 81 | 40-140 | 3 | 25 | |
| Hexatriacontane (C36) | 2.5 | 0.2 | mg/kg wet | 2.500 | | 100 | 40-140 | 2 | 25 | |
| Nonadecane (C19) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 3 | 25 | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 63 | 30-140 | 4 | 25 | |
| Octacosane (C28) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | 2 | 25 | |
| Octadecane (C18) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 2 | 25 | |
| Tetracosane (C24) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 1 | 25 | |
| Tetradecane (C14) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 4 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 29.6 | 10.0 | mg/kg wet | 35.00 | | 84 | 40-140 | 2 | 25 | |
| Triacontane (C30) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 90 | 40-140 | 2 | 25 | |
| *Surrogate: O-Terphenyl* | *3.98* | | mg/kg wet | *5.000* | | *80* | *40-140* | | | |
| **Classical Chemistry** | | | | | | | | | | |
| **Batch DG40328 - General Preparation** | | | | | | | | | | |
| **Reference** | | | | | | | | | | |
| Flashpoint | 81 | | °F | 81.00 | | 100 | 97.9-102.1 | | | |
| **Batch DG40336 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Reactive Cyanide | ND | 2.0 | mg/kg | | | | | | | |
| Reactive Sulfide | ND | 2.0 | mg/kg | | | | | | | |
| **LCS** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Classical Chemistry** | | | | | | | | | | |
| **Batch DG40336 - General Preparation** | | | | | | | | | | |
| Reactive Cyanide | 4.1 | 2.0 | mg/kg | 100.3 | | 4 | 0.68-5.41 | | | |
| Reactive Sulfide | 2.2 | 2.0 | mg/kg | 10.00 | | 22 | 0-44 | | | |
| **Batch DG40348 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Conductivity | ND | 5 | umhos/cm | | | | | | | |
| **LCS** | | | | | | | | | | |
| Conductivity | 1390 | | umhos/cm | 1410 | | 99 | 90-110 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

**Notes and Definitions**

| | |
|---|---|
| Z18 | Temperature is not within 23 +/-2 ºC. |
| WL | Results obtained from a deionized water leach of the sample. |
| U | Analyte included in the analysis, but not detected |
| Q | Calibration required quadratic regression (Q). |
| PT | Pentachlorophenol tailing factor > 2. |
| P | Percent difference between primary and confirmation results exceeds 40% (P). |
| LC | Lower value is used due to matrix interferences (LC). |
| EL | Elevated Method Reporting Limits due to sample matrix (EL). |
| D+ | Relative percent difference for duplicate is outside of criteria (D+). |
| D | Diluted. |
| CD+ | Continuing Calibration %Diff/Drift is above control limit (CD+). |
| B+ | Blank Spike recovery is above upper control limit (B+). |
| > | Greater than. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0130

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24G0130
Date Received: 7/2/2024
Project Due Date: 7/10/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 2.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** (Yes) / No / NA
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? (Yes) / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? (Yes) / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered
    c. Low Level VOA vials frozen: Date: 7/2/24 Time: 1121 By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 568734 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 1 | 568744 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 1 | 568745 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 2 | 568764 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 568765 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 568784 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 568735 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 3 | 568746 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 3 | 568747 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 4 | 568766 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 568767 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 568785 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 568736 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 5 | 568748 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 5 | 568749 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 6 | 568768 | Yes | N/A | Yes | 8 oz jar | NP | |
| 6 | 568769 | Yes | N/A | Yes | 8 oz jar | NP | |
| 6 | 568786 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 568737 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 7 | 568750 | Yes | N/A | Yes | VOA Vial | DI Water | |

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24G0130
Date Received: 7/2/2024

| | | | | | | |
|---|---|---|---|---|---|---|
| 7 | 568751 | Yes | N/A | Yes | VOA Vial | DI Water |
| 8 | 568770 | Yes | N/A | Yes | 8 oz jar | NP |
| 8 | 568771 | Yes | N/A | Yes | 8 oz jar | NP |
| 8 | 568787 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 9 | 568738 | Yes | N/A | Yes | VOA Vial | MeOH |
| 9 | 568752 | Yes | N/A | Yes | VOA Vial | DI Water |
| 9 | 568753 | Yes | N/A | Yes | VOA Vial | DI Water |
| 10 | 568772 | Yes | N/A | Yes | 8 oz jar | NP |
| 10 | 568773 | Yes | N/A | Yes | 8 oz jar | NP |
| 10 | 568788 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 11 | 568739 | Yes | N/A | Yes | VOA Vial | MeOH |
| 11 | 568754 | Yes | N/A | Yes | VOA Vial | DI Water |
| 11 | 568755 | Yes | N/A | Yes | VOA Vial | DI Water |
| 12 | 568774 | Yes | N/A | Yes | 8 oz jar | NP |
| 12 | 568775 | Yes | N/A | Yes | 8 oz jar | NP |
| 12 | 568789 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 13 | 568740 | Yes | N/A | Yes | VOA Vial | MeOH |
| 13 | 568756 | Yes | N/A | Yes | VOA Vial | DI Water |
| 13 | 568757 | Yes | N/A | Yes | VOA Vial | DI Water |
| 14 | 568776 | Yes | N/A | Yes | 8 oz jar | NP |
| 14 | 568777 | Yes | N/A | Yes | 8 oz jar | NP |
| 14 | 568790 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 15 | 568741 | Yes | N/A | Yes | VOA Vial | MeOH |
| 15 | 568758 | Yes | N/A | Yes | VOA Vial | DI Water |
| 15 | 568759 | Yes | N/A | Yes | VOA Vial | DI Water |
| 16 | 568778 | Yes | N/A | Yes | 8 oz jar | NP |
| 16 | 568779 | Yes | N/A | Yes | 8 oz jar | NP |
| 16 | 568791 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 17 | 568742 | Yes | N/A | Yes | VOA Vial | MeOH |
| 17 | 568760 | Yes | N/A | Yes | VOA Vial | DI Water |
| 17 | 568761 | Yes | N/A | Yes | VOA Vial | DI Water |
| 18 | 568780 | Yes | N/A | Yes | 8 oz jar | NP |
| 18 | 568781 | Yes | N/A | Yes | 8 oz jar | NP |
| 18 | 568792 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 19 | 568743 | Yes | N/A | Yes | VOA Vial | MeOH |
| 19 | 568762 | Yes | N/A | Yes | VOA Vial | DI Water |
| 19 | 568763 | Yes | N/A | Yes | VOA Vial | DI Water |
| 20 | 568782 | Yes | N/A | Yes | 8 oz jar | NP |
| 20 | 568783 | Yes | N/A | Yes | 8 oz jar | NP |
| 20 | 568793 | Yes | N/A | Yes | 4 oz. Jar | NP |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials WA

Are barcode labels on correct containers? Yes / No

Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA

Are all Hex Chrome stickers attached? Yes / No / NA

Are all QC stickers attached? Yes / No / NA

Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: [signature] Date & Time: 7/2/24 1737

Reviewed By: [signature] Date & Time: 7/2/24 1815

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 2460130

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Is this project for any of the following?: | ○ CT RCP ◉ MA MCP ○ RGP | |
| Reporting Limits | | |
| Electonic Deliverables | ☑ Data Checker ☑ Other (Please Specify →) | ☑ Excel EDD |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 3 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello; jkitchen, hadam@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: RCRA8 Metals | PCB | TPH | SVOC - incl pyr | Pest - incl Tox | Herbicides | Reactivity | Conductivity | pH | Free Liquid | Flashpoint | VOC - high | VOC - low |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7/2/24 | 09:35 | Grab | Soil | O-0.5 | | | | | | | | | | | | X | X |
| 2 | | 09:35 | Comp | Soil | O-0.5 | X | X | X | X | X | X | X | X | X | X | X | | |
| 3 | | 09:55 | Grab | Soil | K-1 | | | | | | | | | | | | X | X |
| 4 | | 09:55 | Comp | Soil | K-1 | X | X | X | X | X | X | X | X | X | X | X | | |
| 5 | | 10:30 | Grab | Soil | L/M-1 | | | | | | | | | | | | X | X |
| 6 | | 10:30 | Comp | Soil | L/M-1 | X | X | X | X | X | X | X | X | X | X | X | | |
| 7 | | 10:45 | Grab | Soil | K-3 | | | | | | | | | | | | X | X |
| 8 | | 10:45 | Comp | Soil | K-3 | X | X | X | X | X | X | X | X | X | X | X | | |
| 9 | | 11:10 | Grab | Soil | K-4.5 | | | | | | | | | | | | X | X |
| 10 | | 11:10 | Comp | Soil | K-4.5 | X | X | X | X | X | X | X | X | X | X | X | | |
| **Container Type:** AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | | | | | | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | V | V |
| **Container Volume:** 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | | | | | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 7 | 7 |
| **Preservation Code:** 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 10 |
| **Number of Containers per Sample:** | | | | | | 1 | | | | | 1 | | | | | 1 | 1 | 2 |

**Laboratory Use Only**

Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 2.1 °C IC

**Sampled by :** CI

**Comments:** Please specify "Other" preservative and containers types in this space

Run TCLP if fails 20x

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 7/2/24 15:00 | 7/2/24 15:00 | 7/2/24 16:25 | 7/2/24 1625 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24G0130

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Is this project for any of the following?: | ○ CT RCP ◉ MA MCP ○ RGP | |
| Reporting Limits | | |
| Electonic Deliverables | ☑ Data Checker ☑ Other (Please Specify →) | ☑ Excel EDD |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 3 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello; jkitchen, hadam@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: RCRA8 Metals | PCB | TPH | SVOC - incl pyr | Pest - incl Tox | Herbicides | Reactivity | Conductivity | pH | Free Liquid | Flashpoint | VOC - high | VOC - low |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 7/2/24 | 11:30 | Grab | Soil | L/M-4.5 | | | | | | | | | | | | X | X |
| 12 | | 11:30 | Comp | Soil | L/M-4.5 | X | X | X | X | X | X | X | X | X | X | X | | |
| 13 | | 11:55 | Grab | Soil | Q-7 | | | | | | | | | | | | X | X |
| 14 | | 11:55 | Comp | Soil | Q-7 | X | X | X | X | X | X | X | X | X | X | X | | |
| 15 | | 12:15 | Grab | Soil | S-7 | | | | | | | | | | | | X | X |
| 16 | | 12:15 | Comp | Soil | S-7 | X | X | X | X | X | X | X | X | X | X | X | | |
| 17 | | 12:30 | Grab | Soil | U-7 | | | | | | | | | | | | X | X |
| 18 | | 12:30 | Comp | Soil | U-7 | X | X | X | X | X | X | X | X | X | X | X | | |
| 19 | | 12:45 | Grab | Soil | W-7 | | | | | | | | | | | | X | X |
| 20 | ↓ | 12:45 | Comp | Soil | W-7 | X | X | X | X | X | X | X | X | X | X | X | | |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | V | V | | | | |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 7 | 7 | | | | |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 10 | | | | |
| | | | | | | | | | | | **Number of Containers per Sample:** | 1 | | | | | 1 | | | | | 1 | 1 | 2 | | | | |

**Laboratory Use Only**

Cooler Present: 4c ✓ ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 2.1 °C (c

**Sampled by :** CI

**Comments:** Please specify "Other" preservative and containers types in this space

Run TCLP if fails 20x

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 7/2/24 15:00 | 7/2/24 15:10 | 7/2/24 16:25 | 7/2/24 1625 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 3 (332-344)**
**ESS Laboratory Work Order Number: 24G0131**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 2:51 pm, Jul 11, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

## SAMPLE RECEIPT

The following samples were received on July 02, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Low Level VOA vials were frozen by ESS Laboratory on July 2, 2024 at 18:29.**
**Tetrahydrofuran is reported above the MA CAM reporting limit of 0.010 mg/kg.**

**Question I: All samples for metals and EPH were analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24G0131-01 | Y-0.5 | Soil | 8260D Low |
| 24G0131-02 | Y-0.5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0131-03 | W-0.5 | Soil | 8260D Low |
| 24G0131-04 | W-0.5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0131-05 | U-0.5 | Soil | 8260D Low |
| 24G0131-06 | U-0.5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0131-07 | S-0.5 | Soil | 8260D Low |
| 24G0131-08 | S-0.5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

| | | | |
|---|---|---|---|
| 24G0131-09 | Q-0.5 | Soil | 8260D Low |
| 24G0131-10 | Q-0.5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0131-11 | A-5 | Soil | 8260D Low |
| 24G0131-12 | A-5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0131-13 | A-7 | Soil | 8260D Low |
| 24G0131-14 | A-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0131-15 | Y-5 | Soil | 8260D Low |
| 24G0131-16 | Y-5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0131-17 | Y-7 | Soil | 8260D Low |
| 24G0131-18 | Y-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0131-19 | Y-3 | Soil | 8260D Low |
| 24G0131-20 | Y-3 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

## PROJECT NARRATIVE

**8081B Organochlorine Pesticides**

| | |
|---|---|
| 24G0131-06 | **Lower value is used due to matrix interferences (LC).** |
| | 4,4´-DDT |
| 24G0131-06 | **Percent difference between primary and confirmation results exceeds 40% (P).** |
| | 4,4´-DDT |

**8151A Chlorinated Herbicides**

| | |
|---|---|
| D4G0206-CCV1 | **Continuing Calibration %Diff/Drift is above control limit (CD+).** |
| | Dinoseb [2C] (19% @ 15%) |
| D4G0206-CCV2 | **Continuing Calibration %Diff/Drift is above control limit (CD+).** |
| | Dinoseb [2C] (24% @ 15%) |
| D4G0206-CCV3 | **Continuing Calibration %Diff/Drift is above control limit (CD+).** |
| | Dinoseb [2C] (23% @ 15%) |
| D4G0206-CCV4 | **Continuing Calibration %Diff/Drift is above control limit (CD+).** |
| | Dinoseb [2C] (28% @ 15%) |

**Semi-Volatile Organic Compounds**

| | |
|---|---|
| D4G0113-CCV1 | **Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration** |
| | 2,4-Dinitrophenol (70% @ 40-160%) |
| D4G0113-CCV1 | **Calibration required quadratic regression (Q).** |
| | 2,4-Dinitrophenol (70% @ 40-160%), Pentachlorophenol (84% @ 40-160%) |
| D4G0113-CCV1 | **Continuing Calibration %Diff/Drift is above control limit (CD+).** |
| | Di-n-octylphthalate (23% @ 20%) |
| D4G0113-TUN1 | **Benzidine tailing factor >2.** |
| D4G0114-CCV1 | **Calibration required quadratic regression (Q).** |
| | 2,4-Dinitrophenol (81% @ 40-160%) |
| D4G0114-TUN1 | **Pentachlorophenol tailing factor > 2.** |
| DG40304-BSD1 | **Relative percent difference for duplicate is outside of criteria (D+).** |
| | 4-Nitrophenol (49% @ 30%) |

**Total Metals**

| | |
|---|---|
| 24G0131-02 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| | Arsenic |
| 24G0131-04 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| | Arsenic |
| 24G0131-06 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| | Arsenic |
| 24G0131-08 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| | Arsenic |
| 24G0131-10 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| | Arsenic |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

| | |
|---|---|
| 24G0131-12 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| | Arsenic |
| 24G0131-14 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| | Arsenic |
| 24G0131-16 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| | Arsenic |
| 24G0131-18 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| | Arsenic |
| 24G0131-20 | **Elevated Method Reporting Limits due to sample matrix (EL).** |
| | Arsenic |

**Volatile Organics Low Level**

| | |
|---|---|
| D4G0074-CCV1 | **Calibration required quadratic regression (Q).** |
| | Bromoform (93% @ 40-160%), trans-1,3-Dichloropropene (99% @ 80-120%) |
| DG40306-BSD1 | **Relative percent difference for duplicate is outside of criteria (D+).** |
| | Acetone (34% @ 20%) |

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24G0131-01 through 24G0131-20**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| (x) 8260 VOC CAM II A | (x) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | ( ) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| (x) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | (x) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | (x) MassDEP EPH CAM IV B | (x) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes (x) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes ( ) No (x)* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (x)* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: July 11, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-0.5
Date Sampled: 07/01/24 14:10
Percent Solids: 97
Initial Volume: 5.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,1,1-Trichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,1,2,2-Tetrachloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,1,2-Trichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,1-Dichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,1-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,1-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,2,3-Trichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,2,3-Trichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,2,4-Trichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,2,4-Trimethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,2-Dibromoethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,2-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,2-Dichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,2-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,3,5-Trimethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,3-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,3-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,4-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 1,4-Dioxane | ND (0.0924) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 2,2-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 2-Butanone | ND (0.0462) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 2-Chlorotoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 2-Hexanone | ND (0.0462) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 4-Chlorotoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| 4-Isopropyltoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-0.5
Date Sampled: 07/01/24 14:10
Percent Solids: 97
Initial Volume: 5.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0462) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Acetone | ND (0.0462) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Benzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Bromobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Bromochloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Bromodichloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Bromoform | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Bromomethane | ND (0.0092) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Carbon Disulfide | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Carbon Tetrachloride | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Chlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Chloroethane | ND (0.0092) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Chloroform | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Chloromethane | ND (0.0092) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| cis-1,2-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| cis-1,3-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Dibromochloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Dibromomethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Dichlorodifluoromethane | ND (0.0092) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Diethyl Ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Di-isopropyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Ethyl tertiary-butyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Ethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Hexachlorobutadiene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Isopropylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Methyl tert-Butyl Ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Methylene Chloride | ND (0.0231) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-0.5
Date Sampled: 07/01/24 14:10
Percent Solids: 97
Initial Volume: 5.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| n-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| n-Propylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| sec-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Styrene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| tert-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Tertiary-amyl methyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Tetrachloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Tetrahydrofuran | ND (0.0185) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Toluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| trans-1,2-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| trans-1,3-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Trichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Trichlorofluoromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Vinyl Chloride | ND (0.0092) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Xylene O | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Xylene P,M | ND (0.0092) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |
| Xylenes (Total) | ND (0.0092) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 12:47 | D4G0074 | DG40306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *107 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *92 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *96 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-0.5
Date Sampled: 07/01/24 14:10
Percent Solids: 97

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.26) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:41 | 2.29 100 | DG40518 |
| **Barium** | **11.0** (0.90) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:41 | 2.29 100 | DG40518 |
| Cadmium | ND (0.45) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:41 | 2.29 100 | DG40518 |
| **Chromium** | **6.65** (0.90) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:41 | 2.29 100 | DG40518 |
| **Lead** | **11.0** (4.52) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:41 | 2.29 100 | DG40518 |
| Mercury | ND (0.033) | --- | 7471B | --- | 1 | AFV | 07/08/24 17:37 | 0.62 40 | DG40553 |
| Selenium | ND (4.52) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:41 | 2.29 100 | DG40518 |
| Silver | ND (0.45) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:41 | 2.29 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-0.5
Date Sampled: 07/01/24 14:10
Percent Solids: 97
Initial Volume: 20.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.025) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 1,2,4-Trichlorobenzene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 1,2-Dichlorobenzene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 1,3-Dichlorobenzene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 1,4-Dichlorobenzene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 2,4,5-Trichlorophenol | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 2,4,6-Trichlorophenol | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 2,4-Dichlorophenol | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 2,4-Dimethylphenol | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 2,4-Dinitrophenol | ND (0.995) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 2,4-Dinitrotoluene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 2,6-Dinitrotoluene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 2-Chloronaphthalene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 2-Chlorophenol | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 2-Methylnaphthalene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 2-Methylphenol | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 2-Nitrophenol | ND (0.498) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 3,3′-Dichlorobenzidine | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 3+4-Methylphenol | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 4-Bromophenyl-phenylether | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 4-Chloroaniline | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| 4-Nitrophenol | ND (0.995) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Acenaphthene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Acenaphthylene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Acetophenone | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Aniline | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Anthracene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-0.5
Date Sampled: 07/01/24 14:10
Percent Solids: 97
Initial Volume: 20.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Benzo(a)anthracene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Benzo(a)pyrene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Benzo(b)fluoranthene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Benzo(g,h,i)perylene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Benzo(k)fluoranthene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| bis(2-Chloroethoxy)methane | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| bis(2-Chloroethyl)ether | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| bis(2-chloroisopropyl)Ether | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| bis(2-Ethylhexyl)phthalate | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Butylbenzylphthalate | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Chrysene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Dibenzo(a,h)Anthracene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Dibenzofuran | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Diethylphthalate | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Dimethylphthalate | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Di-n-butylphthalate | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Di-n-octylphthalate | ND (0.498) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Fluoranthene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Fluorene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Hexachlorobenzene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Hexachlorobutadiene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Hexachloroethane | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Indeno(1,2,3-cd)Pyrene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Isophorone | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Naphthalene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Nitrobenzene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-0.5
Date Sampled: 07/01/24 14:10
Percent Solids: 97
Initial Volume: 20.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Pentachlorophenol | ND (0.995) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Phenanthrene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Phenol | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Pyrene | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |
| Pyridine | ND (0.249) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:57 | D4G0114 | DG40304 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *94 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *82 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *90 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *73 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *73 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *73 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *82 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *78 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-0.5
Date Sampled: 07/01/24 14:10
Percent Solids: 97
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:36 | --- | DG40207 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:36 | --- | DG40207 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:36 | --- | DG40207 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:36 | --- | DG40207 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:36 | --- | DG40207 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:36 | --- | DG40207 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:36 | --- | DG40207 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:36 | --- | DG40207 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:36 | --- | DG40207 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *92 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *92 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-0.5
Date Sampled: 07/01/24 14:10
Percent Solids: 97
Initial Volume: 19.5g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/3/24 10:40

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| 4,4´-DDE [2C] | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| **4,4´-DDT [2C]** | **0.0047** (0.0027) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| Chlordane (Total) | ND (0.0212) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| Endosulfan II [2C] | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |
| Toxaphene | ND (0.133) | --- | 8081B | --- | 1 | 07/08/24 0:47 | D4G0134 | DG40303 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-0.5
Date Sampled: 07/01/24 14:10
Percent Solids: 97
Initial Volume: 10.4g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.009) | --- | 8151A | --- | 1 | 07/10/24 22:04 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.009) | --- | 8151A | --- | 1 | 07/10/24 22:04 | D4G0206 | DG40831 |
| 2,4-D | ND (0.047) | --- | 8151A | --- | 1 | 07/10/24 22:04 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.047) | --- | 8151A | --- | 1 | 07/10/24 22:04 | D4G0206 | DG40831 |
| Dalapon | ND (0.045) | --- | 8151A | --- | 1 | 07/10/24 22:04 | D4G0206 | DG40831 |
| Dicamba | ND (0.009) | --- | 8151A | --- | 1 | 07/10/24 22:04 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.047) | --- | 8151A | --- | 1 | 07/10/24 22:04 | D4G0206 | DG40831 |
| Dinoseb | ND (0.047) | --- | 8151A | --- | 1 | 07/10/24 22:04 | D4G0206 | DG40831 |
| MCPA | ND (2.31) | --- | 8151A | --- | 1 | 07/10/24 22:04 | D4G0206 | DG40831 |
| MCPP | ND (2.34) | --- | 8151A | --- | 1 | 07/10/24 22:04 | D4G0206 | DG40831 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-0.5
Date Sampled: 07/01/24 14:10
Percent Solids: 97
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 9:35

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **46.1** (10.9) | --- | 8100M | --- | 1 | 07/09/24 20:31 | --- | DG40305 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *84 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-0.5
Date Sampled: 07/01/24 14:10
Percent Solids: 97

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-02
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 414** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:21 | umhos/cm | DG40348 |
| **Corrosivity (pH)** | **7.17** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40258 |
| **Corrosivity (pH) Sample Temp** | **21.5** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40258 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:36 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-0.5
Date Sampled: 07/01/24 14:00
Percent Solids: 96
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,1,1-Trichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,1,2,2-Tetrachloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,1,2-Trichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,1-Dichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,1-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,1-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,2,3-Trichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,2,3-Trichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,2,4-Trichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,2,4-Trimethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,2-Dibromoethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,2-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,2-Dichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,2-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,3,5-Trimethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,3-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,3-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,4-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 1,4-Dioxane | ND (0.0856) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 2,2-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 2-Butanone | ND (0.0428) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 2-Chlorotoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 2-Hexanone | ND (0.0428) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 4-Chlorotoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| 4-Isopropyltoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-0.5
Date Sampled: 07/01/24 14:00
Percent Solids: 96
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0428) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Acetone | ND (0.0428) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Benzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Bromobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Bromochloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Bromodichloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Bromoform | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Bromomethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Carbon Disulfide | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Carbon Tetrachloride | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Chlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Chloroethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Chloroform | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Chloromethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| cis-1,2-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| cis-1,3-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Dibromochloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Dibromomethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Dichlorodifluoromethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Diethyl Ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Di-isopropyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Ethyl tertiary-butyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Ethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Hexachlorobutadiene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Isopropylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Methyl tert-Butyl Ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Methylene Chloride | ND (0.0214) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-0.5
Date Sampled: 07/01/24 14:00
Percent Solids: 96
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| n-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| n-Propylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| sec-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Styrene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| tert-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Tertiary-amyl methyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Tetrachloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Tetrahydrofuran | ND (0.0171) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Toluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| trans-1,2-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| trans-1,3-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Trichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Trichlorofluoromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Vinyl Chloride | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Xylene O | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Xylene P,M | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |
| Xylenes (Total) | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:13 | D4G0074 | DG40306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *107 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *92 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *96 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-0.5
Date Sampled: 07/01/24 14:00
Percent Solids: 96

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.37) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:43 | 2.2 100 | DG40518 |
| **Barium** | **24.0** (0.95) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:43 | 2.2 100 | DG40518 |
| Cadmium | ND (0.47) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:43 | 2.2 100 | DG40518 |
| **Chromium** | **21.5** (0.95) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:43 | 2.2 100 | DG40518 |
| **Lead** | **36.2** (4.75) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:43 | 2.2 100 | DG40518 |
| **Mercury** | **0.041** (0.029) | --- | 7471B | --- | 1 | AFV | 07/08/24 17:40 | 0.71 40 | DG40553 |
| Selenium | ND (4.75) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:43 | 2.2 100 | DG40518 |
| Silver | ND (0.47) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:43 | 2.2 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-0.5
Date Sampled: 07/01/24 14:00
Percent Solids: 96
Initial Volume: 20.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.025) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 1,2,4-Trichlorobenzene | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 1,2-Dichlorobenzene | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 1,3-Dichlorobenzene | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 1,4-Dichlorobenzene | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 2,4,5-Trichlorophenol | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 2,4,6-Trichlorophenol | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 2,4-Dichlorophenol | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 2,4-Dimethylphenol | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 2,4-Dinitrophenol | ND (1.01) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 2,4-Dinitrotoluene | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 2,6-Dinitrotoluene | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 2-Chloronaphthalene | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 2-Chlorophenol | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 2-Methylnaphthalene | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 2-Methylphenol | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 2-Nitrophenol | ND (0.507) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 3,3´-Dichlorobenzidine | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 3+4-Methylphenol | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 4-Bromophenyl-phenylether | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 4-Chloroaniline | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| 4-Nitrophenol | ND (1.01) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Acenaphthene | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Acenaphthylene | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Acetophenone | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Aniline | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Anthracene | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-0.5
Date Sampled: 07/01/24 14:00
Percent Solids: 96
Initial Volume: 20.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| **Benzo(a)anthracene** | **0.411** (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| **Benzo(a)pyrene** | **0.511** (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| **Benzo(b)fluoranthene** | **0.336** (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| **Benzo(g,h,i)perylene** | **0.450** (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| **Benzo(k)fluoranthene** | **0.366** (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| bis(2-Chloroethoxy)methane | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| bis(2-Chloroethyl)ether | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| bis(2-chloroisopropyl)Ether | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| bis(2-Ethylhexyl)phthalate | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Butylbenzylphthalate | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| **Chrysene** | **0.437** (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Dibenzo(a,h)Anthracene | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Dibenzofuran | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Diethylphthalate | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Dimethylphthalate | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Di-n-butylphthalate | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Di-n-octylphthalate | ND (0.507) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| **Fluoranthene** | **0.564** (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Fluorene | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Hexachlorobenzene | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Hexachlorobutadiene | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Hexachloroethane | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| **Indeno(1,2,3-cd)Pyrene** | **0.331** (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Isophorone | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Naphthalene | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Nitrobenzene | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-0.5
Date Sampled: 07/01/24 14:00
Percent Solids: 96
Initial Volume: 20.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Pentachlorophenol | ND (1.01) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Phenanthrene | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Phenol | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| **Pyrene** | **0.806** (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |
| Pyridine | ND (0.254) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:27 | D4G0114 | DG40304 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *91 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *42 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *71 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *70 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *48 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *69 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *74 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *75 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-0.5
Date Sampled: 07/01/24 14:00
Percent Solids: 96
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:56 | --- | DG40302 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:56 | --- | DG40302 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:56 | --- | DG40302 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:56 | --- | DG40302 |
| **Aroclor 1248** | **0.1** (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:56 | --- | DG40302 |
| **Aroclor 1254** | **0.3** (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:56 | --- | DG40302 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:56 | --- | DG40302 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:56 | --- | DG40302 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 13:56 | --- | DG40302 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-0.5
Date Sampled: 07/01/24 14:00
Percent Solids: 96
Initial Volume: 20.8g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/3/24 10:40

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0025) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| 4,4´-DDE | ND (0.0025) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| **4,4´-DDT [2C]** | **0.0123** (0.0025) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| Aldrin | ND (0.0025) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| alpha-BHC | ND (0.0025) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| alpha-Chlordane | ND (0.0025) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| beta-BHC | ND (0.0025) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| Chlordane (Total) | ND (0.0201) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| delta-BHC | ND (0.0025) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| Dieldrin | ND (0.0025) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| Endosulfan I | ND (0.0025) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| Endosulfan II | ND (0.0025) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| Endosulfan Sulfate | ND (0.0025) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| Endrin | ND (0.0025) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| Endrin Ketone | ND (0.0025) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| gamma-BHC (Lindane) | ND (0.0015) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| gamma-Chlordane | ND (0.0025) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| Heptachlor | ND (0.0025) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| Heptachlor Epoxide | ND (0.0025) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| Hexachlorobenzene | ND (0.0025) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| Methoxychlor | ND (0.0025) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |
| Toxaphene | ND (0.126) | --- | 8081B | --- | 1 | 07/08/24 1:14 | D4G0134 | DG40303 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *65 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-0.5
Date Sampled: 07/01/24 14:00
Percent Solids: 96
Initial Volume: 10g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 22:31 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 22:31 | D4G0206 | DG40831 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 22:31 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 07/10/24 22:31 | D4G0206 | DG40831 |
| Dalapon | ND (0.048) | --- | 8151A | --- | 1 | 07/10/24 22:31 | D4G0206 | DG40831 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 22:31 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 22:31 | D4G0206 | DG40831 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 07/10/24 22:31 | D4G0206 | DG40831 |
| MCPA | ND (2.43) | --- | 8151A | --- | 1 | 07/10/24 22:31 | D4G0206 | DG40831 |
| MCPP | ND (2.45) | --- | 8151A | --- | 1 | 07/10/24 22:31 | D4G0206 | DG40831 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-0.5
Date Sampled: 07/01/24 14:00
Percent Solids: 96
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 9:35

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **56.9** (10.7) | --- | 8100M | --- | 1 | 07/09/24 21:03 | --- | DG40305 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *88 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: W-0.5
Date Sampled: 07/01/24 14:00
Percent Solids: 96

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-04
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 306** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:21 | umhos/cm | DG40348 |
| **Corrosivity (pH)** | **10.5** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40258 |
| **Corrosivity (pH) Sample Temp** | **21.7** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40258 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:36 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-0.5
Date Sampled: 07/01/24 14:20
Percent Solids: 95
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,1,1-Trichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,1,2,2-Tetrachloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,1,2-Trichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,1-Dichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,1-Dichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,1-Dichloropropene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,2,3-Trichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,2,3-Trichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,2,4-Trichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,2,4-Trimethylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,2-Dibromoethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,2-Dichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,2-Dichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,2-Dichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,3,5-Trimethylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,3-Dichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,3-Dichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,4-Dichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 1,4-Dioxane | ND (0.0910) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 2,2-Dichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 2-Butanone | ND (0.0455) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 2-Chlorotoluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 2-Hexanone | ND (0.0455) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 4-Chlorotoluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| 4-Isopropyltoluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-0.5
Date Sampled: 07/01/24 14:20
Percent Solids: 95
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0455) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Acetone | ND (0.0455) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Benzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Bromobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Bromochloromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Bromodichloromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Bromoform | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Bromomethane | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Carbon Disulfide | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Carbon Tetrachloride | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Chlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Chloroethane | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Chloroform | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Chloromethane | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| cis-1,2-Dichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| cis-1,3-Dichloropropene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Dibromochloromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Dibromomethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Dichlorodifluoromethane | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Diethyl Ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Di-isopropyl ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Ethyl tertiary-butyl ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Ethylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Hexachlorobutadiene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Isopropylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Methyl tert-Butyl Ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Methylene Chloride | ND (0.0227) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-0.5
Date Sampled: 07/01/24 14:20
Percent Solids: 95
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| n-Butylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| n-Propylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| sec-Butylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Styrene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| tert-Butylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Tertiary-amyl methyl ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Tetrachloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Tetrahydrofuran | ND (0.0182) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Toluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| trans-1,2-Dichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| trans-1,3-Dichloropropene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Trichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Trichlorofluoromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Vinyl Chloride | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Xylene O | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Xylene P,M | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |
| Xylenes (Total) | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 13:38 | D4G0074 | DG40306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *109 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *91 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *97 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-0.5
Date Sampled: 07/01/24 14:20
Percent Solids: 95

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-06
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.15) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:45 | 2.45 100 | DG40518 |
| **Barium** | **19.3** (0.86) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:45 | 2.45 100 | DG40518 |
| Cadmium | ND (0.43) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:45 | 2.45 100 | DG40518 |
| **Chromium** | **14.0** (0.86) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:45 | 2.45 100 | DG40518 |
| **Lead** | **43.3** (4.31) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:45 | 2.45 100 | DG40518 |
| **Mercury** | **0.105** (0.034) | --- | 7471B | --- | 1 | AFV | 07/08/24 17:42 | 0.62 40 | DG40553 |
| Selenium | ND (4.31) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:45 | 2.45 100 | DG40518 |
| Silver | ND (0.86) | --- | 6010D | --- | 2 | KJB | 07/09/24 12:39 | 2.45 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-0.5
Date Sampled: 07/01/24 14:20
Percent Solids: 95
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 1,2,4-Trichlorobenzene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 1,2-Dichlorobenzene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 1,3-Dichlorobenzene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 1,4-Dichlorobenzene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 2,4,5-Trichlorophenol | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 2,4,6-Trichlorophenol | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 2,4-Dichlorophenol | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 2,4-Dimethylphenol | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 2,4-Dinitrophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 2,4-Dinitrotoluene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 2,6-Dinitrotoluene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 2-Chloronaphthalene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 2-Chlorophenol | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 2-Methylnaphthalene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 2-Methylphenol | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 2-Nitrophenol | ND (0.544) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 3,3´-Dichlorobenzidine | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 3+4-Methylphenol | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 4-Bromophenyl-phenylether | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 4-Chloroaniline | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| 4-Nitrophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Acenaphthene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Acenaphthylene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Acetophenone | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Aniline | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Anthracene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-0.5
Date Sampled: 07/01/24 14:20
Percent Solids: 95
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Benzo(a)anthracene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Benzo(a)pyrene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Benzo(b)fluoranthene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Benzo(g,h,i)perylene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Benzo(k)fluoranthene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| bis(2-Chloroethoxy)methane | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| bis(2-Chloroethyl)ether | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| bis(2-chloroisopropyl)Ether | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| bis(2-Ethylhexyl)phthalate | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Butylbenzylphthalate | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Chrysene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Dibenzo(a,h)Anthracene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Dibenzofuran | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Diethylphthalate | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Dimethylphthalate | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Di-n-butylphthalate | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Di-n-octylphthalate | ND (0.544) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| **Fluoranthene** | **0.519** (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Fluorene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Hexachlorobenzene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Hexachlorobutadiene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Hexachloroethane | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Indeno(1,2,3-cd)Pyrene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Isophorone | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Naphthalene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Nitrobenzene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-0.5
Date Sampled: 07/01/24 14:20
Percent Solids: 95
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Pentachlorophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Phenanthrene | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Phenol | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| **Pyrene** | **0.451** (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |
| Pyridine | ND (0.272) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:58 | D4G0114 | DG40304 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *85 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *77 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *83 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *70 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *69 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *62 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *76 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *77 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-0.5
Date Sampled: 07/01/24 14:20
Percent Solids: 95
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:16 | --- | DG40302 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:16 | --- | DG40302 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:16 | --- | DG40302 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:16 | --- | DG40302 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:16 | --- | DG40302 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:16 | --- | DG40302 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:16 | --- | DG40302 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:16 | --- | DG40302 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:16 | --- | DG40302 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-0.5
Date Sampled: 07/01/24 14:20
Percent Solids: 95
Initial Volume: 19.8g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/3/24 10:40

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| **4,4´-DDT** | **P, LC 0.0070** (0.0053) | --- | 8081B | --- | 4 | 07/10/24 16:46 | D4G0134 | DG40303 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| Chlordane (Total) | ND (0.0213) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |
| Toxaphene | ND (0.133) | --- | 8081B | --- | 1 | 07/08/24 1:42 | D4G0134 | DG40303 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *66 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-0.5
Date Sampled: 07/01/24 14:20
Percent Solids: 95
Initial Volume: 10g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 22:57 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 22:57 | D4G0206 | DG40831 |
| 2,4-D | ND (0.050) | --- | 8151A | --- | 1 | 07/10/24 22:57 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 07/10/24 22:57 | D4G0206 | DG40831 |
| Dalapon | ND (0.048) | --- | 8151A | --- | 1 | 07/10/24 22:57 | D4G0206 | DG40831 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 22:57 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.050) | --- | 8151A | --- | 1 | 07/10/24 22:57 | D4G0206 | DG40831 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 07/10/24 22:57 | D4G0206 | DG40831 |
| MCPA | ND (2.45) | --- | 8151A | --- | 1 | 07/10/24 22:57 | D4G0206 | DG40831 |
| MCPP | ND (2.48) | --- | 8151A | --- | 1 | 07/10/24 22:57 | D4G0206 | DG40831 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-0.5
Date Sampled: 07/01/24 14:20
Percent Solids: 95
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 9:35

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **26.1** (10.1) | --- | 8100M | --- | 1 | 07/04/24 1:47 | --- | DG40305 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *78 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: U-0.5
Date Sampled: 07/01/24 14:20
Percent Solids: 95

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-06
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 217** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:21 | umhos/cm | DG40348 |
| **Corrosivity (pH)** | **7.99** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40258 |
| **Corrosivity (pH) Sample Temp** | **21.7** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40258 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:42 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-0.5
Date Sampled: 07/01/24 14:40
Percent Solids: 91
Initial Volume: 5.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,1,1-Trichloroethane | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,1,2,2-Tetrachloroethane | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,1,2-Trichloroethane | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,1-Dichloroethane | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,1-Dichloroethene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,1-Dichloropropene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,2,3-Trichlorobenzene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,2,3-Trichloropropane | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,2,4-Trichlorobenzene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,2,4-Trimethylbenzene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,2-Dibromoethane | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,2-Dichlorobenzene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,2-Dichloroethane | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,2-Dichloropropane | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,3,5-Trimethylbenzene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,3-Dichlorobenzene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,3-Dichloropropane | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,4-Dichlorobenzene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 1,4-Dioxane | ND (0.103) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 2,2-Dichloropropane | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 2-Butanone | ND (0.0516) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 2-Chlorotoluene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 2-Hexanone | ND (0.0516) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 4-Chlorotoluene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| 4-Isopropyltoluene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-0.5
Date Sampled: 07/01/24 14:40
Percent Solids: 91
Initial Volume: 5.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0516) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Acetone | ND (0.0516) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Benzene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Bromobenzene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Bromochloromethane | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Bromodichloromethane | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Bromoform | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Bromomethane | ND (0.0103) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Carbon Disulfide | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Carbon Tetrachloride | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Chlorobenzene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Chloroethane | ND (0.0103) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Chloroform | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Chloromethane | ND (0.0103) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| cis-1,2-Dichloroethene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| cis-1,3-Dichloropropene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Dibromochloromethane | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Dibromomethane | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Dichlorodifluoromethane | ND (0.0103) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Diethyl Ether | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Di-isopropyl ether | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Ethyl tertiary-butyl ether | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Ethylbenzene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Hexachlorobutadiene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Isopropylbenzene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Methyl tert-Butyl Ether | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Methylene Chloride | ND (0.0258) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-0.5
Date Sampled: 07/01/24 14:40
Percent Solids: 91
Initial Volume: 5.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| n-Butylbenzene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| n-Propylbenzene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| sec-Butylbenzene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Styrene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| tert-Butylbenzene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Tertiary-amyl methyl ether | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Tetrachloroethene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Tetrahydrofuran | ND (0.0206) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Toluene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| trans-1,2-Dichloroethene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| trans-1,3-Dichloropropene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Trichloroethene | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Trichlorofluoromethane | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Vinyl Chloride | ND (0.0103) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Xylene O | ND (0.0052) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Xylene P,M | ND (0.0103) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |
| Xylenes (Total) | ND (0.0103) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:04 | D4G0074 | DG40306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *109 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *93 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *96 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-0.5
Date Sampled: 07/01/24 14:40
Percent Solids: 91

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-08
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.71) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:48 | 2.02 100 | DG40518 |
| **Barium** | **20.9** (1.08) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:48 | 2.02 100 | DG40518 |
| Cadmium | ND (0.54) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:48 | 2.02 100 | DG40518 |
| **Chromium** | **15.3** (1.08) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:48 | 2.02 100 | DG40518 |
| **Lead** | **47.6** (5.42) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:48 | 2.02 100 | DG40518 |
| **Mercury** | **0.131** (0.033) | --- | 7471B | --- | 1 | AFV | 07/08/24 17:44 | 0.65 40 | DG40553 |
| Selenium | ND (5.42) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:48 | 2.02 100 | DG40518 |
| Silver | ND (0.54) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:48 | 2.02 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-0.5
Date Sampled: 07/01/24 14:40
Percent Solids: 91
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 1,2,4-Trichlorobenzene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 1,2-Dichlorobenzene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 1,3-Dichlorobenzene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 1,4-Dichlorobenzene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 2,4,5-Trichlorophenol | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 2,4,6-Trichlorophenol | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 2,4-Dichlorophenol | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 2,4-Dimethylphenol | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 2,4-Dinitrophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 2,4-Dinitrotoluene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 2,6-Dinitrotoluene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 2-Chloronaphthalene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 2-Chlorophenol | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 2-Methylnaphthalene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 2-Methylphenol | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 2-Nitrophenol | ND (0.561) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 3,3´-Dichlorobenzidine | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 3+4-Methylphenol | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 4-Bromophenyl-phenylether | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 4-Chloroaniline | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| 4-Nitrophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Acenaphthene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Acenaphthylene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Acetophenone | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Aniline | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| **Anthracene** | **0.459** (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-0.5
Date Sampled: 07/01/24 14:40
Percent Solids: 91
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| **Benzo(a)anthracene** | **0.965** (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| **Benzo(a)pyrene** | **0.897** (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| **Benzo(b)fluoranthene** | **0.835** (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| **Benzo(g,h,i)perylene** | **0.636** (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| **Benzo(k)fluoranthene** | **0.751** (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| bis(2-Chloroethoxy)methane | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| bis(2-Chloroethyl)ether | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| bis(2-chloroisopropyl)Ether | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| bis(2-Ethylhexyl)phthalate | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Butylbenzylphthalate | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| **Chrysene** | **0.997** (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Dibenzo(a,h)Anthracene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Dibenzofuran | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Diethylphthalate | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Dimethylphthalate | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Di-n-butylphthalate | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Di-n-octylphthalate | ND (0.561) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| **Fluoranthene** | **2.51** (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Fluorene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Hexachlorobenzene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Hexachlorobutadiene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Hexachloroethane | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| **Indeno(1,2,3-cd)Pyrene** | **0.617** (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Isophorone | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Naphthalene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Nitrobenzene | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-0.5
Date Sampled: 07/01/24 14:40
Percent Solids: 91
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Pentachlorophenol | ND (1.12) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| **Phenanthrene** | **2.16** (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Phenol | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| **Pyrene** | **1.81** (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |
| Pyridine | ND (0.281) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:28 | D4G0114 | DG40304 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *85 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *83 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *79 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *71 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *68 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *60 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *76 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *76 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-0.5
Date Sampled: 07/01/24 14:40
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 14:36 | --- | DG40302 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 14:36 | --- | DG40302 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 14:36 | --- | DG40302 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 14:36 | --- | DG40302 |
| **Aroclor 1248** | **0.2** (0.06) | --- | 8082A | --- | 1 | 07/05/24 14:36 | --- | DG40302 |
| **Aroclor 1254** | **0.6** (0.06) | --- | 8082A | --- | 1 | 07/05/24 14:36 | --- | DG40302 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 14:36 | --- | DG40302 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 14:36 | --- | DG40302 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 14:36 | --- | DG40302 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *86 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-0.5
Date Sampled: 07/01/24 14:40
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/3/24 10:40

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| 4,4´-DDE | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| **4,4´-DDT** | **0.0237** (0.0028) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| Aldrin | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| alpha-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| alpha-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| beta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| Chlordane (Total) | ND (0.0221) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| delta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| Dieldrin | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| Endosulfan I | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| Endosulfan II | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| Endosulfan Sulfate | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| Endrin | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| Endrin Ketone | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| gamma-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| Heptachlor | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| Heptachlor Epoxide | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| Hexachlorobenzene | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| Methoxychlor | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |
| Toxaphene | ND (0.138) | --- | 8081B | --- | 1 | 07/08/24 2:10 | D4G0134 | DG40303 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *51 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *55 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-0.5
Date Sampled: 07/01/24 14:40
Percent Solids: 91
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 23:24 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 23:24 | D4G0206 | DG40831 |
| 2,4-D | ND (0.051) | --- | 8151A | --- | 1 | 07/10/24 23:24 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.051) | --- | 8151A | --- | 1 | 07/10/24 23:24 | D4G0206 | DG40831 |
| Dalapon | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 23:24 | D4G0206 | DG40831 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 23:24 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.051) | --- | 8151A | --- | 1 | 07/10/24 23:24 | D4G0206 | DG40831 |
| Dinoseb | ND (0.051) | --- | 8151A | --- | 1 | 07/10/24 23:24 | D4G0206 | DG40831 |
| MCPA | ND (2.52) | --- | 8151A | --- | 1 | 07/10/24 23:24 | D4G0206 | DG40831 |
| MCPP | ND (2.55) | --- | 8151A | --- | 1 | 07/10/24 23:24 | D4G0206 | DG40831 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-0.5
Date Sampled: 07/01/24 14:40
Percent Solids: 91
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 9:35

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **18.8** (10.7) | --- | 8100M | --- | 1 | 07/04/24 2:20 | --- | DG40305 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *83 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: S-0.5
Date Sampled: 07/01/24 14:40
Percent Solids: 91

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-08
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 292** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:21 | umhos/cm | DG40348 |
| **Corrosivity (pH)** | **7.80** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40258 |
| **Corrosivity (pH) Sample Temp** | **21.5** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40258 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:42 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-0.5
Date Sampled: 07/01/24 15:00
Percent Solids: 95
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,1,1-Trichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,1,2,2-Tetrachloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,1,2-Trichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,1-Dichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,1-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,1-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,2,3-Trichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,2,3-Trichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,2,4-Trichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,2,4-Trimethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,2-Dibromoethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,2-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,2-Dichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,2-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,3,5-Trimethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,3-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,3-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,4-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 1,4-Dioxane | ND (0.0863) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 2,2-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 2-Butanone | ND (0.0431) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 2-Chlorotoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 2-Hexanone | ND (0.0431) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 4-Chlorotoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| 4-Isopropyltoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-0.5
Date Sampled: 07/01/24 15:00
Percent Solids: 95
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0431) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Acetone | ND (0.0431) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Benzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Bromobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Bromochloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Bromodichloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Bromoform | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Bromomethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Carbon Disulfide | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Carbon Tetrachloride | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Chlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Chloroethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Chloroform | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Chloromethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| cis-1,2-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| cis-1,3-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Dibromochloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Dibromomethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Dichlorodifluoromethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Diethyl Ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Di-isopropyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Ethyl tertiary-butyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Ethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Hexachlorobutadiene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Isopropylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Methyl tert-Butyl Ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Methylene Chloride | ND (0.0216) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-0.5
Date Sampled: 07/01/24 15:00
Percent Solids: 95
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| n-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| n-Propylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| sec-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Styrene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| tert-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Tertiary-amyl methyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Tetrachloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Tetrahydrofuran | ND (0.0173) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Toluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| trans-1,2-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| trans-1,3-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Trichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Trichlorofluoromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Vinyl Chloride | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Xylene O | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Xylene P,M | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |
| Xylenes (Total) | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:30 | D4G0074 | DG40306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *109 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *95 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *97 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-0.5
Date Sampled: 07/01/24 15:00
Percent Solids: 95

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-10
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.23) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:50 | 2.36 100 | DG40518 |
| **Barium** | **12.9** (0.89) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:50 | 2.36 100 | DG40518 |
| Cadmium | ND (0.45) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:50 | 2.36 100 | DG40518 |
| **Chromium** | **7.93** (0.89) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:50 | 2.36 100 | DG40518 |
| **Lead** | **31.4** (4.46) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:50 | 2.36 100 | DG40518 |
| **Mercury** | **0.031** (0.029) | --- | 7471B | --- | 1 | AFV | 07/08/24 17:47 | 0.71 40 | DG40553 |
| Selenium | ND (4.46) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:50 | 2.36 100 | DG40518 |
| Silver | ND (0.45) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:50 | 2.36 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-0.5
Date Sampled: 07/01/24 15:00
Percent Solids: 95
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 1,2,4-Trichlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 1,2-Dichlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 1,3-Dichlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 1,4-Dichlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 2,4,5-Trichlorophenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 2,4,6-Trichlorophenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 2,4-Dichlorophenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 2,4-Dimethylphenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 2,4-Dinitrophenol | ND (1.03) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 2,4-Dinitrotoluene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 2,6-Dinitrotoluene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 2-Chloronaphthalene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 2-Chlorophenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 2-Methylnaphthalene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 2-Methylphenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 2-Nitrophenol | ND (0.513) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 3,3′-Dichlorobenzidine | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 3+4-Methylphenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 4-Bromophenyl-phenylether | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 4-Chloroaniline | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| 4-Nitrophenol | ND (1.03) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Acenaphthene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Acenaphthylene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Acetophenone | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Aniline | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Anthracene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-0.5
Date Sampled: 07/01/24 15:00
Percent Solids: 95
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Benzo(a)anthracene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Benzo(a)pyrene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Benzo(b)fluoranthene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Benzo(g,h,i)perylene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Benzo(k)fluoranthene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| bis(2-Chloroethoxy)methane | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| bis(2-Chloroethyl)ether | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| bis(2-chloroisopropyl)Ether | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| bis(2-Ethylhexyl)phthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Butylbenzylphthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Chrysene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Dibenzo(a,h)Anthracene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Dibenzofuran | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Diethylphthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Dimethylphthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Di-n-butylphthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Di-n-octylphthalate | ND (0.513) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Fluoranthene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Fluorene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Hexachlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Hexachlorobutadiene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Hexachloroethane | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Indeno(1,2,3-cd)Pyrene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Isophorone | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Naphthalene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Nitrobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-0.5
Date Sampled: 07/01/24 15:00
Percent Solids: 95
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Pentachlorophenol | ND (1.03) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Phenanthrene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Phenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Pyrene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |
| Pyridine | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/06/24 3:59 | D4G0114 | DG40304 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *82 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *88 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *77 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *76 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *66 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *67 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *81 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *85 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-0.5
Date Sampled: 07/01/24 15:00
Percent Solids: 95
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:55 | --- | DG40302 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:55 | --- | DG40302 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:55 | --- | DG40302 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:55 | --- | DG40302 |
| Aroclor 1248 [2C] | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:55 | --- | DG40302 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:55 | --- | DG40302 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:55 | --- | DG40302 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:55 | --- | DG40302 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 14:55 | --- | DG40302 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-0.5
Date Sampled: 07/01/24 15:00
Percent Solids: 95
Initial Volume: 20g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/3/24 10:40

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| 4,4´-DDE | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| **4,4´-DDT** | **0.0069** (0.0026) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| Aldrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| alpha-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| alpha-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| beta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| Chlordane (Total) | ND (0.0211) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| delta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| Dieldrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| Endosulfan I | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| Endosulfan II | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| Endosulfan Sulfate | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| Endrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| Endrin Ketone | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| gamma-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| Heptachlor | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| Heptachlor Epoxide | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| Hexachlorobenzene | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| Methoxychlor | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |
| Toxaphene | ND (0.132) | --- | 8081B | --- | 1 | 07/08/24 2:37 | D4G0134 | DG40303 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *68 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-0.5
Date Sampled: 07/01/24 15:00
Percent Solids: 95
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 23:50 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 23:50 | D4G0206 | DG40831 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 23:50 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 23:50 | D4G0206 | DG40831 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 07/10/24 23:50 | D4G0206 | DG40831 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/10/24 23:50 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 23:50 | D4G0206 | DG40831 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 07/10/24 23:50 | D4G0206 | DG40831 |
| MCPA | ND (2.40) | --- | 8151A | --- | 1 | 07/10/24 23:50 | D4G0206 | DG40831 |
| MCPP | ND (2.43) | --- | 8151A | --- | 1 | 07/10/24 23:50 | D4G0206 | DG40831 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-0.5
Date Sampled: 07/01/24 15:00
Percent Solids: 95
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 9:35

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **15.9** (11.0) | --- | 8100M | --- | 1 | 07/09/24 23:45 | --- | DG40305 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *74 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Q-0.5
Date Sampled: 07/01/24 15:00
Percent Solids: 95

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-10
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 140** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:21 | umhos/cm | DG40348 |
| **Corrosivity (pH)** | **7.18** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40258 |
| **Corrosivity (pH) Sample Temp** | **21.4** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40258 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:42 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-5
Date Sampled: 07/01/24 12:15
Percent Solids: 95
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,1,1-Trichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,1,2,2-Tetrachloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,1,2-Trichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,1-Dichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,1-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,1-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,2,3-Trichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,2,3-Trichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,2,4-Trichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,2,4-Trimethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,2-Dibromoethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,2-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,2-Dichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,2-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,3,5-Trimethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,3-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,3-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,4-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 1,4-Dioxane | ND (0.0865) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 2,2-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 2-Butanone | ND (0.0432) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 2-Chlorotoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 2-Hexanone | ND (0.0432) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 4-Chlorotoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| 4-Isopropyltoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-5
Date Sampled: 07/01/24 12:15
Percent Solids: 95
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0432) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Acetone | ND (0.0432) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Benzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Bromobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Bromochloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Bromodichloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Bromoform | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Bromomethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Carbon Disulfide | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Carbon Tetrachloride | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Chlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Chloroethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Chloroform | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Chloromethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| cis-1,2-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| cis-1,3-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Dibromochloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Dibromomethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Dichlorodifluoromethane | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Diethyl Ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Di-isopropyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Ethyl tertiary-butyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Ethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Hexachlorobutadiene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Isopropylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Methyl tert-Butyl Ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Methylene Chloride | ND (0.0216) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-5
Date Sampled: 07/01/24 12:15
Percent Solids: 95
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| n-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| n-Propylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| sec-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Styrene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| tert-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Tertiary-amyl methyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Tetrachloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Tetrahydrofuran | ND (0.0173) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Toluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| trans-1,2-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| trans-1,3-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Trichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Trichlorofluoromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Vinyl Chloride | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Xylene O | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Xylene P,M | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |
| Xylenes (Total) | ND (0.0086) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:55 | D4G0074 | DG40306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *110 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *93 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *97 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-5
Date Sampled: 07/01/24 12:15
Percent Solids: 95

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-12
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.45) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:52 | 2.15 100 | DG40518 |
| **Barium** | **10.5** (0.98) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:52 | 2.15 100 | DG40518 |
| Cadmium | ND (0.49) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:52 | 2.15 100 | DG40518 |
| **Chromium** | **6.43** (0.98) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:52 | 2.15 100 | DG40518 |
| **Lead** | **10.0** (4.91) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:52 | 2.15 100 | DG40518 |
| Mercury | ND (0.034) | --- | 7471B | --- | 1 | AFV | 07/08/24 17:49 | 0.61 40 | DG40553 |
| Selenium | ND (4.91) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:52 | 2.15 100 | DG40518 |
| Silver | ND (0.49) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:52 | 2.15 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-5
Date Sampled: 07/01/24 12:15
Percent Solids: 95
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 1,2,4-Trichlorobenzene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 1,2-Dichlorobenzene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 1,3-Dichlorobenzene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 1,4-Dichlorobenzene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 2,4,5-Trichlorophenol | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 2,4,6-Trichlorophenol | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 2,4-Dichlorophenol | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 2,4-Dimethylphenol | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 2,4-Dinitrophenol | ND (1.07) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 2,4-Dinitrotoluene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 2,6-Dinitrotoluene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 2-Chloronaphthalene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 2-Chlorophenol | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 2-Methylnaphthalene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 2-Methylphenol | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 2-Nitrophenol | ND (0.536) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 3,3´-Dichlorobenzidine | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 3+4-Methylphenol | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 4-Bromophenyl-phenylether | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 4-Chloroaniline | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| 4-Nitrophenol | ND (1.07) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Acenaphthene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Acenaphthylene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Acetophenone | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Aniline | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Anthracene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-5
Date Sampled: 07/01/24 12:15
Percent Solids: 95
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Benzo(a)anthracene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Benzo(a)pyrene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Benzo(b)fluoranthene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Benzo(g,h,i)perylene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Benzo(k)fluoranthene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| bis(2-Chloroethoxy)methane | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| bis(2-Chloroethyl)ether | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| bis(2-chloroisopropyl)Ether | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| bis(2-Ethylhexyl)phthalate | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Butylbenzylphthalate | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Chrysene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Dibenzo(a,h)Anthracene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Dibenzofuran | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Diethylphthalate | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Dimethylphthalate | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Di-n-butylphthalate | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Di-n-octylphthalate | ND (0.536) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Fluoranthene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Fluorene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Hexachlorobenzene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Hexachlorobutadiene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Hexachloroethane | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Indeno(1,2,3-cd)Pyrene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Isophorone | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Naphthalene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Nitrobenzene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-5
Date Sampled: 07/01/24 12:15
Percent Solids: 95
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Pentachlorophenol | ND (1.07) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Phenanthrene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Phenol | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Pyrene | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |
| Pyridine | ND (0.268) | --- | 8270E | --- | 1 | TJ | 07/06/24 4:29 | D4G0114 | DG40304 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *77 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *83 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *76 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *66 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *59 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *63 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *68 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *76 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-5
Date Sampled: 07/01/24 12:15
Percent Solids: 95
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:15 | --- | DG40302 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:15 | --- | DG40302 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:15 | --- | DG40302 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:15 | --- | DG40302 |
| **Aroclor 1248 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:15 | --- | DG40302 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:15 | --- | DG40302 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:15 | --- | DG40302 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:15 | --- | DG40302 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:15 | --- | DG40302 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *87 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-5
Date Sampled: 07/01/24 12:15
Percent Solids: 95
Initial Volume: 19.6g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/3/24 10:40

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| **4,4´-DDT** | **0.0097** (0.0027) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| Chlordane (Total) | ND (0.0215) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |
| Toxaphene | ND (0.135) | --- | 8081B | --- | 1 | 07/08/24 3:05 | D4G0134 | DG40303 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *62 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *70 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-5
Date Sampled: 07/01/24 12:15
Percent Solids: 95
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 0:17 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 0:17 | D4G0206 | DG40831 |
| 2,4-D | ND (0.048) | --- | 8151A | --- | 1 | 07/11/24 0:17 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 0:17 | D4G0206 | DG40831 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 07/11/24 0:17 | D4G0206 | DG40831 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 0:17 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.048) | --- | 8151A | --- | 1 | 07/11/24 0:17 | D4G0206 | DG40831 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 0:17 | D4G0206 | DG40831 |
| MCPA | ND (2.38) | --- | 8151A | --- | 1 | 07/11/24 0:17 | D4G0206 | DG40831 |
| MCPP | ND (2.41) | --- | 8151A | --- | 1 | 07/11/24 0:17 | D4G0206 | DG40831 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-5
Date Sampled: 07/01/24 12:15
Percent Solids: 95
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 15:55

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **20.0** (10.4) | --- | 8100M | --- | 1 | 07/09/24 21:35 | --- | DG40339 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | 65 % | | 40-140 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-5
Date Sampled: 07/01/24 12:15
Percent Solids: 95

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-12
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 11100** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:21 | umhos/cm | DG40348 |
| **Corrosivity (pH)** | **6.18** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40258 |
| **Corrosivity (pH) Sample Temp** | **21.5** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40258 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:48 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-7
Date Sampled: 07/01/24 12:30
Percent Solids: 95
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,1,1-Trichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,1,2,2-Tetrachloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,1,2-Trichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,1-Dichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,1-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,1-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,2,3-Trichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,2,3-Trichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,2,4-Trichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,2,4-Trimethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,2-Dibromoethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,2-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,2-Dichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,2-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,3,5-Trimethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,3-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,3-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,4-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 1,4-Dioxane | ND (0.0919) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 2,2-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 2-Butanone | ND (0.0459) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 2-Chlorotoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 2-Hexanone | ND (0.0459) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 4-Chlorotoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| 4-Isopropyltoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-7
Date Sampled: 07/01/24 12:30
Percent Solids: 95
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0459) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Acetone | ND (0.0459) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Benzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Bromobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Bromochloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Bromodichloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Bromoform | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Bromomethane | ND (0.0092) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Carbon Disulfide | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Carbon Tetrachloride | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Chlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Chloroethane | ND (0.0092) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Chloroform | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Chloromethane | ND (0.0092) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| cis-1,2-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| cis-1,3-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Dibromochloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Dibromomethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Dichlorodifluoromethane | ND (0.0092) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Diethyl Ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Di-isopropyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Ethyl tertiary-butyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Ethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Hexachlorobutadiene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Isopropylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Methyl tert-Butyl Ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Methylene Chloride | ND (0.0230) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-7
Date Sampled: 07/01/24 12:30
Percent Solids: 95
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| n-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| n-Propylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| sec-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Styrene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| tert-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Tertiary-amyl methyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Tetrachloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Tetrahydrofuran | ND (0.0184) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Toluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| trans-1,2-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| trans-1,3-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Trichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Trichlorofluoromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Vinyl Chloride | ND (0.0092) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Xylene O | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Xylene P,M | ND (0.0092) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |
| Xylenes (Total) | ND (0.0092) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:21 | D4G0074 | DG40306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *111 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *93 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *98 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-7
Date Sampled: 07/01/24 12:30
Percent Solids: 95

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-14
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.18) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:54 | 2.4 100 | DG40518 |
| **Barium** | **10.6** (0.87) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:54 | 2.4 100 | DG40518 |
| Cadmium | ND (0.44) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:54 | 2.4 100 | DG40518 |
| **Chromium** | **6.81** (0.87) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:54 | 2.4 100 | DG40518 |
| **Lead** | **12.1** (4.37) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:54 | 2.4 100 | DG40518 |
| Mercury | ND (0.035) | --- | 7471B | --- | 1 | AFV | 07/08/24 17:51 | 0.6 40 | DG40553 |
| Selenium | ND (4.37) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:54 | 2.4 100 | DG40518 |
| Silver | ND (0.44) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:54 | 2.4 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-7
Date Sampled: 07/01/24 12:30
Percent Solids: 95
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 1,2,4-Trichlorobenzene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 1,2-Dichlorobenzene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 1,3-Dichlorobenzene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 1,4-Dichlorobenzene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 2,4,5-Trichlorophenol | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 2,4,6-Trichlorophenol | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 2,4-Dichlorophenol | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 2,4-Dimethylphenol | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 2,4-Dinitrophenol | ND (1.04) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 2,4-Dinitrotoluene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 2,6-Dinitrotoluene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 2-Chloronaphthalene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 2-Chlorophenol | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 2-Methylnaphthalene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 2-Methylphenol | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 2-Nitrophenol | ND (0.521) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 3,3´-Dichlorobenzidine | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 3+4-Methylphenol | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 4-Bromophenyl-phenylether | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 4-Chloroaniline | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| 4-Nitrophenol | ND (1.04) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Acenaphthene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Acenaphthylene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Acetophenone | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Aniline | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Anthracene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-7
Date Sampled: 07/01/24 12:30
Percent Solids: 95
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Benzo(a)anthracene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Benzo(a)pyrene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Benzo(b)fluoranthene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Benzo(g,h,i)perylene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Benzo(k)fluoranthene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| bis(2-Chloroethoxy)methane | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| bis(2-Chloroethyl)ether | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| bis(2-chloroisopropyl)Ether | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| bis(2-Ethylhexyl)phthalate | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Butylbenzylphthalate | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Chrysene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Dibenzo(a,h)Anthracene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Dibenzofuran | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Diethylphthalate | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Dimethylphthalate | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Di-n-butylphthalate | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Di-n-octylphthalate | ND (0.521) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Fluoranthene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Fluorene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Hexachlorobenzene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Hexachlorobutadiene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Hexachloroethane | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Indeno(1,2,3-cd)Pyrene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Isophorone | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Naphthalene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Nitrobenzene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-7
Date Sampled: 07/01/24 12:30
Percent Solids: 95
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Pentachlorophenol | ND (1.04) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Phenanthrene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Phenol | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Pyrene | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |
| Pyridine | ND (0.261) | --- | 8270E | --- | 1 | TJ | 07/06/24 5:00 | D4G0114 | DG40304 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *86 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *90 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *88 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *77 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *73 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *80 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *78 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *84 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-7
Date Sampled: 07/01/24 12:30
Percent Solids: 95
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:34 | --- | DG40302 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:34 | --- | DG40302 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:34 | --- | DG40302 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:34 | --- | DG40302 |
| **Aroclor 1248 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:34 | --- | DG40302 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:34 | --- | DG40302 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:34 | --- | DG40302 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:34 | --- | DG40302 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:34 | --- | DG40302 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-7
Date Sampled: 07/01/24 12:30
Percent Solids: 95
Initial Volume: 20.4g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/3/24 10:40

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| 4,4´-DDE | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| **4,4´-DDT** | **0.0069** (0.0026) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| Aldrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| alpha-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| alpha-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| beta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| Chlordane (Total) | ND (0.0205) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| delta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| Dieldrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| Endosulfan I | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| Endosulfan II | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| Endosulfan Sulfate | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| Endrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| Endrin Ketone | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| gamma-BHC (Lindane) | ND (0.0015) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| gamma-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| Heptachlor | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| Heptachlor Epoxide | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| Hexachlorobenzene | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| Methoxychlor | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |
| Toxaphene | ND (0.128) | --- | 8081B | --- | 1 | 07/08/24 3:33 | D4G0134 | DG40303 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-7
Date Sampled: 07/01/24 12:30
Percent Solids: 95
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 0:43 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 0:43 | D4G0206 | DG40831 |
| 2,4-D | ND (0.048) | --- | 8151A | --- | 1 | 07/11/24 0:43 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 0:43 | D4G0206 | DG40831 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 07/11/24 0:43 | D4G0206 | DG40831 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 0:43 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.048) | --- | 8151A | --- | 1 | 07/11/24 0:43 | D4G0206 | DG40831 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 0:43 | D4G0206 | DG40831 |
| MCPA | ND (2.39) | --- | 8151A | --- | 1 | 07/11/24 0:43 | D4G0206 | DG40831 |
| MCPP | ND (2.41) | --- | 8151A | --- | 1 | 07/11/24 0:43 | D4G0206 | DG40831 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-7
Date Sampled: 07/01/24 12:30
Percent Solids: 95
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 15:55

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **13.2** (10.9) | --- | 8100M | --- | 1 | 07/09/24 22:07 | --- | DG40339 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *78 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-7
Date Sampled: 07/01/24 12:30
Percent Solids: 95

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-14
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 1070** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:48 | umhos/cm | DG40349 |
| **Corrosivity (pH)** | **7.98** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40258 |
| **Corrosivity (pH) Sample Temp** | **21.4** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40258 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:48 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-5
Date Sampled: 07/01/24 13:10
Percent Solids: 96
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,1,1-Trichloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,1,2,2-Tetrachloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,1,2-Trichloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,1-Dichloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,1-Dichloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,1-Dichloropropene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,2,3-Trichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,2,3-Trichloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,2,4-Trichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,2,4-Trimethylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,2-Dibromoethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,2-Dichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,2-Dichloroethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,2-Dichloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,3,5-Trimethylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,3-Dichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,3-Dichloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,4-Dichlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 1,4-Dioxane | ND (0.0887) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 2,2-Dichloropropane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 2-Butanone | ND (0.0443) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 2-Chlorotoluene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 2-Hexanone | ND (0.0443) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 4-Chlorotoluene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| 4-Isopropyltoluene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-5
Date Sampled: 07/01/24 13:10
Percent Solids: 96
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0443) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Acetone | ND (0.0443) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Benzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Bromobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Bromochloromethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Bromodichloromethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Bromoform | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Bromomethane | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Carbon Disulfide | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Carbon Tetrachloride | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Chlorobenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Chloroethane | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Chloroform | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Chloromethane | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| cis-1,2-Dichloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| cis-1,3-Dichloropropene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Dibromochloromethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Dibromomethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Dichlorodifluoromethane | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Diethyl Ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Di-isopropyl ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Ethyl tertiary-butyl ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Ethylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Hexachlorobutadiene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Isopropylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Methyl tert-Butyl Ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Methylene Chloride | ND (0.0222) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-5
Date Sampled: 07/01/24 13:10
Percent Solids: 96
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| n-Butylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| n-Propylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| sec-Butylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Styrene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| tert-Butylbenzene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Tertiary-amyl methyl ether | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Tetrachloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Tetrahydrofuran | ND (0.0177) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Toluene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| trans-1,2-Dichloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| trans-1,3-Dichloropropene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Trichloroethene | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Trichlorofluoromethane | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Vinyl Chloride | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Xylene O | ND (0.0044) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Xylene P,M | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |
| Xylenes (Total) | ND (0.0089) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:47 | D4G0074 | DG40306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *111 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *94 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *97 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-5
Date Sampled: 07/01/24 13:10
Percent Solids: 96

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-16
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.17) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:56 | 2.41 100 | DG40518 |
| **Barium** | **7.84** (0.87) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:56 | 2.41 100 | DG40518 |
| Cadmium | ND (0.43) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:56 | 2.41 100 | DG40518 |
| **Chromium** | **5.38** (0.87) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:56 | 2.41 100 | DG40518 |
| **Lead** | **7.24** (4.34) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:56 | 2.41 100 | DG40518 |
| Mercury | ND (0.032) | --- | 7471B | --- | 1 | AFV | 07/08/24 17:53 | 0.65 40 | DG40553 |
| Selenium | ND (4.34) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:56 | 2.41 100 | DG40518 |
| Silver | ND (0.43) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:56 | 2.41 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-5
Date Sampled: 07/01/24 13:10
Percent Solids: 96
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 1,2,4-Trichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 1,2-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 1,3-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 1,4-Dichlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 2,4,5-Trichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 2,4,6-Trichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 2,4-Dichlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 2,4-Dimethylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 2,4-Dinitrophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 2,4-Dinitrotoluene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 2,6-Dinitrotoluene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 2-Chloronaphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 2-Chlorophenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 2-Methylnaphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 2-Methylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 2-Nitrophenol | ND (0.542) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 3,3´-Dichlorobenzidine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 3+4-Methylphenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 4-Bromophenyl-phenylether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 4-Chloroaniline | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| 4-Nitrophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Acenaphthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Acenaphthylene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Acetophenone | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Aniline | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-5
Date Sampled: 07/01/24 13:10
Percent Solids: 96
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Benzo(a)anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Benzo(a)pyrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Benzo(b)fluoranthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Benzo(g,h,i)perylene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Benzo(k)fluoranthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| bis(2-Chloroethoxy)methane | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| bis(2-Chloroethyl)ether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| bis(2-chloroisopropyl)Ether | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| bis(2-Ethylhexyl)phthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Butylbenzylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Chrysene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Dibenzo(a,h)Anthracene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Dibenzofuran | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Diethylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Dimethylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Di-n-butylphthalate | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Di-n-octylphthalate | ND (0.542) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Fluoranthene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Fluorene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Hexachlorobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Hexachlorobutadiene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Hexachloroethane | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Indeno(1,2,3-cd)Pyrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Isophorone | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Naphthalene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Nitrobenzene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-5
Date Sampled: 07/01/24 13:10
Percent Solids: 96
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Pentachlorophenol | ND (1.08) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Phenanthrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Phenol | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Pyrene | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |
| Pyridine | ND (0.271) | --- | 8270E | --- | 1 | TJ | 07/05/24 20:49 | D4G0113 | DG40304 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *80 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *68 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *80 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *84 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *70 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *77 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *69 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *97 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-5
Date Sampled: 07/01/24 13:10
Percent Solids: 96
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:54 | --- | DG40302 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:54 | --- | DG40302 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:54 | --- | DG40302 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:54 | --- | DG40302 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:54 | --- | DG40302 |
| **Aroclor 1254 [2C]** | **0.07** (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:54 | --- | DG40302 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:54 | --- | DG40302 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:54 | --- | DG40302 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 15:54 | --- | DG40302 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *86 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-5
Date Sampled: 07/01/24 13:10
Percent Solids: 96
Initial Volume: 19.2g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/3/24 10:40

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| 4,4´-DDT [2C] | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| Chlordane (Total) | ND (0.0218) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |
| Toxaphene | ND (0.136) | --- | 8081B | --- | 1 | 07/08/24 4:00 | D4G0134 | DG40303 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *69 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-5
Date Sampled: 07/01/24 13:10
Percent Solids: 96
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 1:10 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 1:10 | D4G0206 | DG40831 |
| 2,4-D | ND (0.048) | --- | 8151A | --- | 1 | 07/11/24 1:10 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 1:10 | D4G0206 | DG40831 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 07/11/24 1:10 | D4G0206 | DG40831 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 1:10 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.048) | --- | 8151A | --- | 1 | 07/11/24 1:10 | D4G0206 | DG40831 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 1:10 | D4G0206 | DG40831 |
| MCPA | ND (2.39) | --- | 8151A | --- | 1 | 07/11/24 1:10 | D4G0206 | DG40831 |
| MCPP | ND (2.41) | --- | 8151A | --- | 1 | 07/11/24 1:10 | D4G0206 | DG40831 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: DCAA* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-5
Date Sampled: 07/01/24 13:10
Percent Solids: 96
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 15:55

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (10.6) | --- | 8100M | --- | 1 | 07/09/24 22:40 | --- | DG40339 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | 67 % | | 40-140 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-5
Date Sampled: 07/01/24 13:10
Percent Solids: 96

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-16
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 424** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:48 | umhos/cm | DG40349 |
| **Corrosivity (pH)** | **7.11** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40258 |
| **Corrosivity (pH) Sample Temp** | **21.6** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40258 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:48 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-7
Date Sampled: 07/01/24 13:20
Percent Solids: 96
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,1,1-Trichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,1,2,2-Tetrachloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,1,2-Trichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,1-Dichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,1-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,1-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,2,3-Trichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,2,3-Trichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,2,4-Trichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,2,4-Trimethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,2-Dibromoethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,2-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,2-Dichloroethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,2-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,3,5-Trimethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,3-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,3-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,4-Dichlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 1,4-Dioxane | ND (0.0854) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 2,2-Dichloropropane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 2-Butanone | ND (0.0427) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 2-Chlorotoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 2-Hexanone | ND (0.0427) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 4-Chlorotoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| 4-Isopropyltoluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-7
Date Sampled: 07/01/24 13:20
Percent Solids: 96
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0427) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Acetone | ND (0.0427) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Benzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Bromobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Bromochloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Bromodichloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Bromoform | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Bromomethane | ND (0.0085) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Carbon Disulfide | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Carbon Tetrachloride | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Chlorobenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Chloroethane | ND (0.0085) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Chloroform | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Chloromethane | ND (0.0085) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| cis-1,2-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| cis-1,3-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Dibromochloromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Dibromomethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Dichlorodifluoromethane | ND (0.0085) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Diethyl Ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Di-isopropyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Ethyl tertiary-butyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Ethylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Hexachlorobutadiene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Isopropylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Methyl tert-Butyl Ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Methylene Chloride | ND (0.0213) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-7
Date Sampled: 07/01/24 13:20
Percent Solids: 96
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| n-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| n-Propylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| sec-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Styrene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| tert-Butylbenzene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Tertiary-amyl methyl ether | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Tetrachloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Tetrahydrofuran | ND (0.0171) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Toluene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| trans-1,2-Dichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| trans-1,3-Dichloropropene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Trichloroethene | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Trichlorofluoromethane | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Vinyl Chloride | ND (0.0085) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Xylene O | ND (0.0043) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Xylene P,M | ND (0.0085) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |
| Xylenes (Total) | ND (0.0085) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:13 | D4G0074 | DG40306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *110 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *93 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *98 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-7
Date Sampled: 07/01/24 13:20
Percent Solids: 96

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-18
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.47) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:58 | 2.11 100 | DG40518 |
| **Barium** | **8.04** (0.99) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:58 | 2.11 100 | DG40518 |
| Cadmium | ND (0.49) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:58 | 2.11 100 | DG40518 |
| **Chromium** | **6.87** (0.99) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:58 | 2.11 100 | DG40518 |
| **Lead** | **7.14** (4.94) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:58 | 2.11 100 | DG40518 |
| Mercury | ND (0.029) | --- | 7471B | --- | 1 | AFV | 07/08/24 18:00 | 0.7 40 | DG40553 |
| Selenium | ND (4.94) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:58 | 2.11 100 | DG40518 |
| Silver | ND (0.49) | --- | 6010D | --- | 1 | CEV | 07/08/24 15:58 | 2.11 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-7
Date Sampled: 07/01/24 13:20
Percent Solids: 96
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 1,2,4-Trichlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 1,2-Dichlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 1,3-Dichlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 1,4-Dichlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 2,4,5-Trichlorophenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 2,4,6-Trichlorophenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 2,4-Dichlorophenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 2,4-Dimethylphenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 2,4-Dinitrophenol | ND (1.03) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 2,4-Dinitrotoluene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 2,6-Dinitrotoluene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 2-Chloronaphthalene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 2-Chlorophenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 2-Methylnaphthalene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 2-Methylphenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 2-Nitrophenol | ND (0.513) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 3,3´-Dichlorobenzidine | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 3+4-Methylphenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 4-Bromophenyl-phenylether | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 4-Chloroaniline | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| 4-Nitrophenol | ND (1.03) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Acenaphthene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Acenaphthylene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Acetophenone | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Aniline | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Anthracene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-7
Date Sampled: 07/01/24 13:20
Percent Solids: 96
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Benzo(a)anthracene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Benzo(a)pyrene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Benzo(b)fluoranthene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Benzo(g,h,i)perylene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Benzo(k)fluoranthene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| bis(2-Chloroethoxy)methane | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| bis(2-Chloroethyl)ether | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| bis(2-chloroisopropyl)Ether | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| bis(2-Ethylhexyl)phthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Butylbenzylphthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Chrysene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Dibenzo(a,h)Anthracene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Dibenzofuran | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Diethylphthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Dimethylphthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Di-n-butylphthalate | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Di-n-octylphthalate | ND (0.513) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Fluoranthene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Fluorene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Hexachlorobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Hexachlorobutadiene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Hexachloroethane | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Indeno(1,2,3-cd)Pyrene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Isophorone | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Naphthalene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Nitrobenzene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-7
Date Sampled: 07/01/24 13:20
Percent Solids: 96
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Pentachlorophenol | ND (1.03) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Phenanthrene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Phenol | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Pyrene | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |
| Pyridine | ND (0.257) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:19 | D4G0113 | DG40304 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *80 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *69 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *83 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *87 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *70 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *83 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *72 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *103 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-7
Date Sampled: 07/01/24 13:20
Percent Solids: 96
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 16:14 | --- | DG40302 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 16:14 | --- | DG40302 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 16:14 | --- | DG40302 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 16:14 | --- | DG40302 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 16:14 | --- | DG40302 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 16:14 | --- | DG40302 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 16:14 | --- | DG40302 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 16:14 | --- | DG40302 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 16:14 | --- | DG40302 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *87 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-7
Date Sampled: 07/01/24 13:20
Percent Solids: 96
Initial Volume: 19.5g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/3/24 10:40

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| **4,4´-DDT** | **0.0040** (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| Chlordane (Total) | ND (0.0214) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |
| Toxaphene | ND (0.134) | --- | 8081B | --- | 1 | 07/08/24 4:28 | D4G0134 | DG40303 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *62 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *64 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-7
Date Sampled: 07/01/24 13:20
Percent Solids: 96
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 1:36 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 1:36 | D4G0206 | DG40831 |
| 2,4-D | ND (0.048) | --- | 8151A | --- | 1 | 07/11/24 1:36 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.048) | --- | 8151A | --- | 1 | 07/11/24 1:36 | D4G0206 | DG40831 |
| Dalapon | ND (0.046) | --- | 8151A | --- | 1 | 07/11/24 1:36 | D4G0206 | DG40831 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 1:36 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.048) | --- | 8151A | --- | 1 | 07/11/24 1:36 | D4G0206 | DG40831 |
| Dinoseb | ND (0.048) | --- | 8151A | --- | 1 | 07/11/24 1:36 | D4G0206 | DG40831 |
| MCPA | ND (2.35) | --- | 8151A | --- | 1 | 07/11/24 1:36 | D4G0206 | DG40831 |
| MCPP | ND (2.38) | --- | 8151A | --- | 1 | 07/11/24 1:36 | D4G0206 | DG40831 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *65 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-7
Date Sampled: 07/01/24 13:20
Percent Solids: 96
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 15:55

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **10.8** (10.3) | --- | 8100M | --- | 1 | 07/10/24 2:18 | --- | DG40339 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *80 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-7
Date Sampled: 07/01/24 13:20
Percent Solids: 96

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-18
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 715** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:48 | umhos/cm | DG40349 |
| **Corrosivity (pH)** | **8.63** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40258 |
| **Corrosivity (pH) Sample Temp** | **21.6** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40258 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:55 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-3
Date Sampled: 07/01/24 13:40
Percent Solids: 96
Initial Volume: 6.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,1,1-Trichloroethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,1,2,2-Tetrachloroethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,1,2-Trichloroethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,1-Dichloroethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,1-Dichloroethene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,1-Dichloropropene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,2,3-Trichlorobenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,2,3-Trichloropropane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,2,4-Trichlorobenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,2,4-Trimethylbenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,2-Dibromoethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,2-Dichlorobenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,2-Dichloroethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,2-Dichloropropane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,3,5-Trimethylbenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,3-Dichlorobenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,3-Dichloropropane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,4-Dichlorobenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 1,4-Dioxane | ND (0.0843) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 2,2-Dichloropropane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 2-Butanone | ND (0.0422) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 2-Chlorotoluene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 2-Hexanone | ND (0.0422) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 4-Chlorotoluene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| 4-Isopropyltoluene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-3
Date Sampled: 07/01/24 13:40
Percent Solids: 96
Initial Volume: 6.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0422) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Acetone | ND (0.0422) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Benzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Bromobenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Bromochloromethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Bromodichloromethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Bromoform | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Bromomethane | ND (0.0084) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Carbon Disulfide | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Carbon Tetrachloride | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Chlorobenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Chloroethane | ND (0.0084) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Chloroform | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Chloromethane | ND (0.0084) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| cis-1,2-Dichloroethene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| cis-1,3-Dichloropropene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Dibromochloromethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Dibromomethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Dichlorodifluoromethane | ND (0.0084) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Diethyl Ether | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Di-isopropyl ether | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Ethyl tertiary-butyl ether | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Ethylbenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Hexachlorobutadiene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Isopropylbenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Methyl tert-Butyl Ether | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Methylene Chloride | ND (0.0211) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-3
Date Sampled: 07/01/24 13:40
Percent Solids: 96
Initial Volume: 6.2g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| n-Butylbenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| n-Propylbenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| sec-Butylbenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Styrene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| tert-Butylbenzene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Tertiary-amyl methyl ether | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Tetrachloroethene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Tetrahydrofuran | ND (0.0169) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Toluene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| trans-1,2-Dichloroethene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| trans-1,3-Dichloropropene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Trichloroethene | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Trichlorofluoromethane | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Vinyl Chloride | ND (0.0084) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Xylene O | ND (0.0042) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Xylene P,M | ND (0.0084) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |
| Xylenes (Total) | ND (0.0084) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:38 | D4G0074 | DG40306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *111 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *94 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *98 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-3
Date Sampled: 07/01/24 13:40
Percent Solids: 96

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-20
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.13) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:00 | 2.45 100 | DG40518 |
| **Barium** | **8.96** (0.85) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:00 | 2.45 100 | DG40518 |
| Cadmium | ND (0.43) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:00 | 2.45 100 | DG40518 |
| **Chromium** | **5.41** (0.85) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:00 | 2.45 100 | DG40518 |
| **Lead** | **14.4** (4.27) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:00 | 2.45 100 | DG40518 |
| Mercury | ND (0.031) | --- | 7471B | --- | 1 | AFV | 07/08/24 18:02 | 0.67 40 | DG40553 |
| Selenium | ND (4.27) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:00 | 2.45 100 | DG40518 |
| Silver | ND (0.43) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:00 | 2.45 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-3
Date Sampled: 07/01/24 13:40
Percent Solids: 96
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 1,2,4-Trichlorobenzene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 1,2-Dichlorobenzene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 1,3-Dichlorobenzene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 1,4-Dichlorobenzene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 2,4,5-Trichlorophenol | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 2,4,6-Trichlorophenol | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 2,4-Dichlorophenol | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 2,4-Dimethylphenol | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 2,4-Dinitrophenol | ND (1.04) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 2,4-Dinitrotoluene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 2,6-Dinitrotoluene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 2-Chloronaphthalene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 2-Chlorophenol | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 2-Methylnaphthalene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 2-Methylphenol | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 2-Nitrophenol | ND (0.518) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 3,3´-Dichlorobenzidine | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 3+4-Methylphenol | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 4-Bromophenyl-phenylether | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 4-Chloroaniline | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| 4-Nitrophenol | ND (1.04) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Acenaphthene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Acenaphthylene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Acetophenone | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Aniline | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Anthracene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-3
Date Sampled: 07/01/24 13:40
Percent Solids: 96
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Benzo(a)anthracene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Benzo(a)pyrene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Benzo(b)fluoranthene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Benzo(g,h,i)perylene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Benzo(k)fluoranthene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| bis(2-Chloroethoxy)methane | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| bis(2-Chloroethyl)ether | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| bis(2-chloroisopropyl)Ether | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| bis(2-Ethylhexyl)phthalate | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Butylbenzylphthalate | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Chrysene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Dibenzo(a,h)Anthracene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Dibenzofuran | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Diethylphthalate | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Dimethylphthalate | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Di-n-butylphthalate | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Di-n-octylphthalate | ND (0.518) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Fluoranthene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Fluorene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Hexachlorobenzene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Hexachlorobutadiene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Hexachloroethane | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Indeno(1,2,3-cd)Pyrene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Isophorone | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Naphthalene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Nitrobenzene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-3
Date Sampled: 07/01/24 13:40
Percent Solids: 96
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 8:55

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Pentachlorophenol | ND (1.04) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Phenanthrene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Phenol | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Pyrene | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |
| Pyridine | ND (0.259) | --- | 8270E | --- | 1 | TJ | 07/05/24 21:50 | D4G0113 | DG40304 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *78 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *72 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *82 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *84 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *76 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *80 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *71 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *95 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-3
Date Sampled: 07/01/24 13:40
Percent Solids: 96
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 16:33 | --- | DG40302 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 16:33 | --- | DG40302 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 16:33 | --- | DG40302 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 16:33 | --- | DG40302 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 16:33 | --- | DG40302 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 16:33 | --- | DG40302 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 16:33 | --- | DG40302 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 16:33 | --- | DG40302 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 16:33 | --- | DG40302 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-3
Date Sampled: 07/01/24 13:40
Percent Solids: 96
Initial Volume: 20.4g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/5/24 14:51

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| 4,4´-DDE | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| 4,4´-DDT | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| Aldrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| alpha-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| alpha-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| beta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| Chlordane (Total) | ND (0.0205) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| delta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| Dieldrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| Endosulfan I | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| Endosulfan II | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| Endosulfan Sulfate | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| Endrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| Endrin Ketone | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| gamma-BHC (Lindane) | ND (0.0015) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| gamma-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| Heptachlor | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| Heptachlor Epoxide | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| Hexachlorobenzene | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| Methoxychlor | ND (0.0026) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |
| Toxaphene | ND (0.128) | --- | 8081B | --- | 1 | 07/08/24 18:49 | D4G0160 | DG40533 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *63 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-3
Date Sampled: 07/01/24 13:40
Percent Solids: 96
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/8/24 16:00

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 2:03 | D4G0206 | DG40831 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 2:03 | D4G0206 | DG40831 |
| 2,4-D | ND (0.048) | --- | 8151A | --- | 1 | 07/11/24 2:03 | D4G0206 | DG40831 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 2:03 | D4G0206 | DG40831 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 07/11/24 2:03 | D4G0206 | DG40831 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 2:03 | D4G0206 | DG40831 |
| Dichlorprop | ND (0.048) | --- | 8151A | --- | 1 | 07/11/24 2:03 | D4G0206 | DG40831 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 2:03 | D4G0206 | DG40831 |
| MCPA | ND (2.38) | --- | 8151A | --- | 1 | 07/11/24 2:03 | D4G0206 | DG40831 |
| MCPP | ND (2.41) | --- | 8151A | --- | 1 | 07/11/24 2:03 | D4G0206 | DG40831 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-3
Date Sampled: 07/01/24 13:40
Percent Solids: 96
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 15:55

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **25.2** (10.6) | --- | 8100M | --- | 1 | 07/10/24 3:07 | --- | DG40339 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *83 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: Y-3
Date Sampled: 07/01/24 13:40
Percent Solids: 96

ESS Laboratory Work Order: 24G0131
ESS Laboratory Sample ID: 24G0131-20
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 142** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:48 | umhos/cm | DG40349 |
| **Corrosivity (pH)** | **8.70** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40258 |
| **Corrosivity (pH) Sample Temp** | **21.6** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40258 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | CCP | 07/03/24 18:12 | °F | DG40328 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 17:55 | ml/5 min | DG40353 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/03/24 19:12 | mg/kg | DG40336 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DG40518 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Arsenic | ND | 2.35 | mg/kg wet | | | | | | | |
| Barium | ND | 0.94 | mg/kg wet | | | | | | | |
| Cadmium | ND | 0.47 | mg/kg wet | | | | | | | |
| Chromium | ND | 0.94 | mg/kg wet | | | | | | | |
| Lead | ND | 4.69 | mg/kg wet | | | | | | | |
| Selenium | ND | 4.69 | mg/kg wet | | | | | | | |
| Silver | ND | 0.47 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Arsenic | 303 | 7.04 | mg/kg wet | 360.0 | | 84 | 80-120 | | | |
| Barium | 305 | 2.82 | mg/kg wet | 332.0 | | 92 | 80-120 | | | |
| Cadmium | 211 | 1.41 | mg/kg wet | 238.0 | | 89 | 80-120 | | | |
| Chromium | 190 | 2.82 | mg/kg wet | 199.0 | | 95 | 80-120 | | | |
| Lead | 87.6 | 14.1 | mg/kg wet | 100.0 | | 88 | 80-120 | | | |
| Selenium | 157 | 14.1 | mg/kg wet | 170.0 | | 92 | 80-120 | | | |
| Silver | 77.1 | 1.41 | mg/kg wet | 88.60 | | 87 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Arsenic | 304 | 7.94 | mg/kg wet | 360.0 | | 85 | 80-120 | 0.5 | 30 | |
| Barium | 311 | 3.17 | mg/kg wet | 332.0 | | 94 | 80-120 | 2 | 30 | |
| Cadmium | 223 | 1.59 | mg/kg wet | 238.0 | | 94 | 80-120 | 6 | 30 | |
| Chromium | 189 | 3.17 | mg/kg wet | 199.0 | | 95 | 80-120 | 0.3 | 30 | |
| Lead | 90.6 | 15.9 | mg/kg wet | 100.0 | | 91 | 80-120 | 3 | 30 | |
| Selenium | 158 | 15.9 | mg/kg wet | 170.0 | | 93 | 80-120 | 0.9 | 30 | |
| Silver | 79.4 | 1.59 | mg/kg wet | 88.60 | | 90 | 80-120 | 3 | 30 | |
| **Batch DG40553 - 7471B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Mercury | ND | 0.027 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Mercury | 15.0 | 3.30 | mg/kg wet | 14.40 | | 104 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Mercury | 15.6 | 3.19 | mg/kg wet | 14.40 | | 108 | 80-120 | 4 | 30 | |
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40306 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40306 - 5035** | | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dioxane | ND | 0.100 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Acetone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromoform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Carbon Disulfide | ND | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Chloroform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromomethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40306 - 5035** | | | | | | | | | | |
| Methylene Chloride | ND | 0.0250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.0050 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 0.0200 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.0100 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.0050 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.0100 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0501* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0476* | | mg/kg wet | *0.05000* | | *95* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0457* | | mg/kg wet | *0.05000* | | *91* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0509* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| 1,1,1-Trichloroethane | 0.0496 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 0.0444 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 40-160 | | | |
| 1,1,2-Trichloroethane | 0.0478 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| 1,1-Dichloroethane | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| 1,1-Dichloroethene | 0.0511 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,1-Dichloropropene | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| 1,2,3-Trichloropropane | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0461 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| 1,2-Dibromoethane | 0.0492 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| 1,2-Dichlorobenzene | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| 1,2-Dichloroethane | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| 1,2-Dichloropropane | 0.0493 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0514 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,3-Dichlorobenzene | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| 1,3-Dichloropropane | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| 1,4-Dichlorobenzene | 0.0472 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| 1,4-Dioxane | 0.944 | 0.100 | mg/kg wet | 1.000 | | 94 | 70-130 | | | |
| 2,2-Dichloropropane | 0.0579 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40306 - 5035** | | | | | | | | | | |
| 2-Butanone | 0.251 | 0.0500 | mg/kg wet | 0.2500 | | 100 | 40-160 | | | |
| 2-Chlorotoluene | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| 2-Hexanone | 0.244 | 0.0500 | mg/kg wet | 0.2500 | | 98 | 40-160 | | | |
| 4-Chlorotoluene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 4-Isopropyltoluene | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 0.219 | 0.0500 | mg/kg wet | 0.2500 | | 88 | 40-160 | | | |
| Acetone | 0.337 | 0.0500 | mg/kg wet | 0.2500 | | 135 | 40-160 | | | |
| Benzene | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Bromobenzene | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Bromochloromethane | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Bromodichloromethane | 0.0526 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| Bromoform | 0.0446 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 40-160 | | | |
| Bromomethane | 0.0504 | 0.0100 | mg/kg wet | 0.05000 | | 101 | 40-160 | | | |
| Carbon Disulfide | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Carbon Tetrachloride | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Chlorobenzene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| Chloroethane | 0.0506 | 0.0100 | mg/kg wet | 0.05000 | | 101 | 40-160 | | | |
| Chloroform | 0.0481 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Chloromethane | 0.0432 | 0.0100 | mg/kg wet | 0.05000 | | 86 | 40-160 | | | |
| cis-1,2-Dichloroethene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| cis-1,3-Dichloropropene | 0.0555 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 40-160 | | | |
| Dibromochloromethane | 0.0550 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 40-160 | | | |
| Dibromomethane | 0.0500 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| Dichlorodifluoromethane | 0.0300 | 0.0100 | mg/kg wet | 0.05000 | | 60 | 40-160 | | | |
| Diethyl Ether | 0.0552 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| Di-isopropyl ether | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 0.0541 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Ethylbenzene | 0.0512 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Hexachlorobutadiene | 0.0457 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 40-160 | | | |
| Isopropylbenzene | 0.0564 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | | | |
| Methyl tert-Butyl Ether | 0.0535 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| Methylene Chloride | 0.0492 | 0.0250 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Naphthalene | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 40-160 | | | |
| n-Butylbenzene | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| n-Propylbenzene | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| sec-Butylbenzene | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| Styrene | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 40-160 | | | |
| tert-Butylbenzene | 0.0500 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| Tertiary-amyl methyl ether | 0.0540 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Tetrachloroethene | 0.0436 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 70-130 | | | |
| Tetrahydrofuran | 0.0478 | 0.0200 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Toluene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| trans-1,2-Dichloroethene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| trans-1,3-Dichloropropene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| Trichloroethene | 0.0465 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40306 - 5035** | | | | | | | | | | |
| Trichlorofluoromethane | 0.0473 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 40-160 | | | |
| Vinyl Chloride | 0.0410 | 0.0100 | mg/kg wet | 0.05000 | | 82 | 70-130 | | | |
| Xylene O | 0.0526 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| Xylene P,M | 0.104 | 0.0100 | mg/kg wet | 0.1000 | | 104 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0473* | | mg/kg wet | *0.05000* | | *95* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0512* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0483* | | mg/kg wet | *0.05000* | | *97* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0497* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 3 | 20 | |
| 1,1,1-Trichloroethane | 0.0473 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 5 | 20 | |
| 1,1,2,2-Tetrachloroethane | 0.0428 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 40-160 | 4 | 20 | |
| 1,1,2-Trichloroethane | 0.0453 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | 5 | 20 | |
| 1,1-Dichloroethane | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 5 | 20 | |
| 1,1-Dichloroethene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 3 | 20 | |
| 1,1-Dichloropropene | 0.0481 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 4 | 20 | |
| 1,2,3-Trichlorobenzene | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 0.9 | 20 | |
| 1,2,3-Trichloropropane | 0.0433 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 70-130 | 5 | 20 | |
| 1,2,4-Trichlorobenzene | 0.0511 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 0.5 | 20 | |
| 1,2,4-Trimethylbenzene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 3 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 0.0449 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | 3 | 20 | |
| 1,2-Dibromoethane | 0.0472 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 4 | 20 | |
| 1,2-Dichlorobenzene | 0.0456 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | 3 | 20 | |
| 1,2-Dichloroethane | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 6 | 20 | |
| 1,2-Dichloropropane | 0.0467 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 5 | 20 | |
| 1,3,5-Trimethylbenzene | 0.0493 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 4 | 20 | |
| 1,3-Dichlorobenzene | 0.0459 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 4 | 20 | |
| 1,3-Dichloropropane | 0.0483 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 4 | 20 | |
| 1,4-Dichlorobenzene | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 3 | 20 | |
| 1,4-Dioxane | 0.968 | 0.100 | mg/kg wet | 1.000 | | 97 | 70-130 | 3 | 20 | |
| 2,2-Dichloropropane | 0.0547 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 6 | 20 | |
| 2-Butanone | 0.221 | 0.0500 | mg/kg wet | 0.2500 | | 88 | 40-160 | 12 | 20 | |
| 2-Chlorotoluene | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 4 | 20 | |
| 2-Hexanone | 0.218 | 0.0500 | mg/kg wet | 0.2500 | | 87 | 40-160 | 11 | 20 | |
| 4-Chlorotoluene | 0.0476 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 4 | 20 | |
| 4-Isopropyltoluene | 0.0465 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 2 | 20 | |
| 4-Methyl-2-Pentanone | 0.210 | 0.0500 | mg/kg wet | 0.2500 | | 84 | 40-160 | 4 | 20 | |
| Acetone | 0.240 | 0.0500 | mg/kg wet | 0.2500 | | 96 | 40-160 | 34 | 20 | D+ |
| Benzene | 0.0471 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 4 | 20 | |
| Bromobenzene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 4 | 20 | |
| Bromochloromethane | 0.0479 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 5 | 20 | |
| Bromodichloromethane | 0.0500 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 5 | 20 | |
| Bromoform | 0.0434 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 40-160 | 3 | 20 | |
| Bromomethane | 0.0476 | 0.0100 | mg/kg wet | 0.05000 | | 95 | 40-160 | 6 | 20 | |
| Carbon Disulfide | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 3 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40306 - 5035** | | | | | | | | | | |
| Carbon Tetrachloride | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| Chlorobenzene | 0.0467 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 4 | 20 | |
| Chloroethane | 0.0480 | 0.0100 | mg/kg wet | 0.05000 | | 96 | 40-160 | 5 | 20 | |
| Chloroform | 0.0457 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | 5 | 20 | |
| Chloromethane | 0.0415 | 0.0100 | mg/kg wet | 0.05000 | | 83 | 40-160 | 4 | 20 | |
| cis-1,2-Dichloroethene | 0.0480 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 5 | 20 | |
| cis-1,3-Dichloropropene | 0.0528 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 40-160 | 5 | 20 | |
| Dibromochloromethane | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 40-160 | 4 | 20 | |
| Dibromomethane | 0.0476 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 5 | 20 | |
| Dichlorodifluoromethane | 0.0277 | 0.0100 | mg/kg wet | 0.05000 | | 55 | 40-160 | 8 | 20 | |
| Diethyl Ether | 0.0529 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 4 | 20 | |
| Di-isopropyl ether | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 6 | 20 | |
| Ethyl tertiary-butyl ether | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 5 | 20 | |
| Ethylbenzene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 3 | 20 | |
| Hexachlorobutadiene | 0.0460 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 40-160 | 0.7 | 20 | |
| Isopropylbenzene | 0.0546 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 3 | 20 | |
| Methyl tert-Butyl Ether | 0.0511 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 5 | 20 | |
| Methylene Chloride | 0.0468 | 0.0250 | mg/kg wet | 0.05000 | | 94 | 70-130 | 5 | 20 | |
| Naphthalene | 0.0483 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 40-160 | 2 | 20 | |
| n-Butylbenzene | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 2 | 20 | |
| n-Propylbenzene | 0.0483 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| sec-Butylbenzene | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 3 | 20 | |
| Styrene | 0.0512 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 40-160 | 4 | 20 | |
| tert-Butylbenzene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| Tertiary-amyl methyl ether | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 5 | 20 | |
| Tetrachloroethene | 0.0417 | 0.0050 | mg/kg wet | 0.05000 | | 83 | 70-130 | 4 | 20 | |
| Tetrahydrofuran | 0.0469 | 0.0200 | mg/kg wet | 0.05000 | | 94 | 70-130 | 2 | 20 | |
| Toluene | 0.0467 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 4 | 20 | |
| trans-1,2-Dichloroethene | 0.0476 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 4 | 20 | |
| trans-1,3-Dichloropropene | 0.0467 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 4 | 20 | |
| Trichloroethene | 0.0445 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | 4 | 20 | |
| Trichlorofluoromethane | 0.0454 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 40-160 | 4 | 20 | |
| Vinyl Chloride | 0.0365 | 0.0100 | mg/kg wet | 0.05000 | | 73 | 70-130 | 12 | 20 | |
| Xylene O | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 3 | 20 | |
| Xylene P,M | 0.100 | 0.0100 | mg/kg wet | 0.1000 | | 100 | 70-130 | 4 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0469* | | mg/kg wet | *0.05000* | | *94* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0515* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0476* | | mg/kg wet | *0.05000* | | *95* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0494* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DG40304 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DG40304 - 3546** | | | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DG40304 - 3546** | | | | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyridine | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.30* | | mg/kg wet | *2.500* | | *92* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.79* | | mg/kg wet | *3.750* | | *101* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.41* | | mg/kg wet | *3.750* | | *91* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *1.95* | | mg/kg wet | *2.500* | | *78* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.36* | | mg/kg wet | *3.750* | | *63* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.21* | | mg/kg wet | *2.500* | | *88* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.11* | | mg/kg wet | *3.750* | | *83* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.40* | | mg/kg wet | *2.500* | | *96* | *30-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.19 | 0.025 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 1.97 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| 1,2-Dichlorobenzene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| 1,3-Dichlorobenzene | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 30-130 | | | |
| 2,4-Dichlorophenol | 1.85 | 0.250 | mg/kg wet | 2.500 | | 74 | 30-130 | | | |
| 2,4-Dimethylphenol | 1.96 | 0.250 | mg/kg wet | 2.500 | | 79 | 30-130 | | | |
| 2,4-Dinitrophenol | 1.73 | 1.00 | mg/kg wet | 2.500 | | 69 | 15-140 | | | |
| 2,4-Dinitrotoluene | 2.34 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| 2-Chloronaphthalene | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| 2-Chlorophenol | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | | | |
| 2-Methylnaphthalene | 1.83 | 0.250 | mg/kg wet | 2.500 | | 73 | 40-140 | | | |
| 2-Methylphenol | 1.98 | 0.250 | mg/kg wet | 2.500 | | 79 | 15-140 | | | |
| 2-Nitrophenol | 1.96 | 0.500 | mg/kg wet | 2.500 | | 78 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.19 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| 3+4-Methylphenol | 4.15 | 0.250 | mg/kg wet | 5.000 | | 83 | 15-140 | | | |
| 4-Bromophenyl-phenylether | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| 4-Chloroaniline | 1.77 | 0.250 | mg/kg wet | 2.500 | | 71 | 15-140 | | | |
| 4-Nitrophenol | 1.01 | 1.00 | mg/kg wet | 2.500 | | 40 | 15-140 | | | |
| Acenaphthene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DG40304 - 3546** | | | | | | | | | | |
| Acenaphthylene | 2.14 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Acetophenone | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Aniline | 1.23 | 0.250 | mg/kg wet | 2.500 | | 49 | 40-140 | | | |
| Anthracene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Azobenzene | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Benzo(a)anthracene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Benzo(a)pyrene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 1.67 | 0.250 | mg/kg wet | 2.500 | | 67 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 2.02 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Butylbenzylphthalate | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Chrysene | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Dibenzofuran | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Diethylphthalate | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Dimethylphthalate | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 15-140 | | | |
| Di-n-butylphthalate | 2.34 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Di-n-octylphthalate | 2.43 | 0.500 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Fluoranthene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Fluorene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Hexachlorobenzene | 2.14 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Hexachlorobutadiene | 1.87 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | | | |
| Hexachloroethane | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Isophorone | 1.85 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| Naphthalene | 1.85 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| Nitrobenzene | 1.75 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | | | |
| N-Nitrosodimethylamine | 2.60 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Pentachlorophenol | 1.81 | 1.00 | mg/kg wet | 2.500 | | 72 | 15-140 | | | |
| Phenanthrene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Phenol | 1.55 | 0.250 | mg/kg wet | 2.500 | | 62 | 15-140 | | | |
| Pyrene | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Pyridine | 1.70 | 0.250 | mg/kg wet | 2.500 | | 68 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.23* | | mg/kg wet | *2.500* | | *89* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.19* | | mg/kg wet | *3.750* | | *85* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.34* | | mg/kg wet | *3.750* | | *89* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.16* | | mg/kg wet | *2.500* | | *86* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.21* | | mg/kg wet | *3.750* | | *59* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.00* | | mg/kg wet | *2.500* | | *80* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.29* | | mg/kg wet | *3.750* | | *88* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.25* | | mg/kg wet | *2.500* | | *90* | *30-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DG40304 - 3546** | | | | | | | | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.14 | 0.025 | mg/kg wet | 2.500 | | 86 | 40-140 | 3 | 30 | |
| 1,2,4-Trichlorobenzene | 1.86 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | 6 | 30 | |
| 1,2-Dichlorobenzene | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 4 | 30 | |
| 1,3-Dichlorobenzene | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | 2 | 30 | |
| 1,4-Dichlorobenzene | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 4 | 30 | |
| 2,4,5-Trichlorophenol | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 30-130 | 4 | 30 | |
| 2,4,6-Trichlorophenol | 1.82 | 0.250 | mg/kg wet | 2.500 | | 73 | 30-130 | 5 | 30 | |
| 2,4-Dichlorophenol | 1.76 | 0.250 | mg/kg wet | 2.500 | | 70 | 30-130 | 5 | 30 | |
| 2,4-Dimethylphenol | 1.86 | 0.250 | mg/kg wet | 2.500 | | 75 | 30-130 | 5 | 30 | |
| 2,4-Dinitrophenol | 1.93 | 1.00 | mg/kg wet | 2.500 | | 77 | 15-140 | 11 | 30 | |
| 2,4-Dinitrotoluene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 4 | 30 | |
| 2,6-Dinitrotoluene | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 3 | 30 | |
| 2-Chloronaphthalene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 4 | 30 | |
| 2-Chlorophenol | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 30-130 | 3 | 30 | |
| 2-Methylnaphthalene | 1.76 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | 4 | 30 | |
| 2-Methylphenol | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 15-140 | 2 | 30 | |
| 2-Nitrophenol | 1.85 | 0.500 | mg/kg wet | 2.500 | | 74 | 30-130 | 6 | 30 | |
| 3,3´-Dichlorobenzidine | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 6 | 30 | |
| 3+4-Methylphenol | 4.12 | 0.250 | mg/kg wet | 5.000 | | 82 | 15-140 | 0.7 | 30 | |
| 4-Bromophenyl-phenylether | 1.99 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 4 | 30 | |
| 4-Chloroaniline | 1.67 | 0.250 | mg/kg wet | 2.500 | | 67 | 15-140 | 6 | 30 | |
| 4-Nitrophenol | 1.67 | 1.00 | mg/kg wet | 2.500 | | 67 | 15-140 | 49 | 30 | D+ |
| Acenaphthene | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 1 | 30 | |
| Acenaphthylene | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 3 | 30 | |
| Acetophenone | 2.06 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 1 | 30 | |
| Aniline | 1.16 | 0.250 | mg/kg wet | 2.500 | | 46 | 40-140 | 6 | 30 | |
| Anthracene | 2.14 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 4 | 30 | |
| Azobenzene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 6 | 30 | |
| Benzo(a)anthracene | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 5 | 30 | |
| Benzo(a)pyrene | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 4 | 30 | |
| Benzo(b)fluoranthene | 2.06 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 3 | 30 | |
| Benzo(g,h,i)perylene | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 2 | 30 | |
| Benzo(k)fluoranthene | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 4 | 30 | |
| bis(2-Chloroethoxy)methane | 1.61 | 0.250 | mg/kg wet | 2.500 | | 64 | 40-140 | 4 | 30 | |
| bis(2-Chloroethyl)ether | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 1 | 30 | |
| bis(2-chloroisopropyl)Ether | 1.81 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | 8 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | 6 | 30 | |
| Butylbenzylphthalate | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 6 | 30 | |
| Chrysene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 5 | 30 | |
| Dibenzo(a,h)Anthracene | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 8 | 30 | |
| Dibenzofuran | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 5 | 30 | |
| Diethylphthalate | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 4 | 30 | |
| Dimethylphthalate | 2.16 | 0.250 | mg/kg wet | 2.500 | | 87 | 15-140 | 2 | 30 | |
| Di-n-butylphthalate | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 6 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DG40304 - 3546** | | | | | | | | | | |
| Di-n-octylphthalate | 2.29 | 0.500 | mg/kg wet | 2.500 | | 92 | 40-140 | 6 | 30 | |
| Fluoranthene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 3 | 30 | |
| Fluorene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 5 | 30 | |
| Hexachlorobenzene | 2.02 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | 5 | 30 | |
| Hexachlorobutadiene | 1.82 | 0.250 | mg/kg wet | 2.500 | | 73 | 40-140 | 3 | 30 | |
| Hexachloroethane | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 5 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.19 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 3 | 30 | |
| Isophorone | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | 3 | 30 | |
| Naphthalene | 1.79 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | 3 | 30 | |
| Nitrobenzene | 1.75 | 0.250 | mg/kg wet | 2.500 | | 70 | 40-140 | 0.08 | 30 | |
| N-Nitrosodimethylamine | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 8 | 30 | |
| Pentachlorophenol | 1.66 | 1.00 | mg/kg wet | 2.500 | | 67 | 15-140 | 8 | 30 | |
| Phenanthrene | 1.99 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 5 | 30 | |
| Phenol | 1.48 | 0.250 | mg/kg wet | 2.500 | | 59 | 15-140 | 5 | 30 | |
| Pyrene | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 3 | 30 | |
| Pyridine | 1.63 | 0.250 | mg/kg wet | 2.500 | | 65 | 40-140 | 5 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.08* | | mg/kg wet | *2.500* | | *83* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.01* | | mg/kg wet | *3.750* | | *80* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.27* | | mg/kg wet | *3.750* | | *87* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.03* | | mg/kg wet | *2.500* | | *81* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *2.07* | | mg/kg wet | *3.750* | | *55* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.88* | | mg/kg wet | *2.500* | | *75* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.06* | | mg/kg wet | *3.750* | | *82* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.10* | | mg/kg wet | *2.500* | | *84* | *30-130* | | | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DG40207 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.02 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DG40207 - 3540C** | | | | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0230* | | mg/kg wet | *0.02500* | | *92* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0224* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0194* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 89 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 84 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 94 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 92 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0245* | | mg/kg wet | *0.02500* | | *98* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0233* | | mg/kg wet | *0.02500* | | *93* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0199* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 93 | 40-140 | 4 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 88 | 40-140 | 4 | 30 | |
| Aroclor 1260 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 96 | 40-140 | 2 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 94 | 40-140 | 2 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0246* | | mg/kg wet | *0.02500* | | *98* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0235* | | mg/kg wet | *0.02500* | | *94* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0218* | | mg/kg wet | *0.02500* | | *87* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0212* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| **Batch DG40302 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0212* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DG40302 - 3540C** | | | | | | | | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0220* | | mg/kg wet | *0.02500* | | *88* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 85 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 80 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 86 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0221* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0196* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | 4 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 87 | 40-140 | 3 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 4 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | 3 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0214* | | mg/kg wet | *0.02500* | | *86* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0223* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0204* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DG40303 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 4,4´-DDD | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDD [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT | ND | 0.0012 | mg/kg wet | | | | | | | |
| 4,4´-DDT [2C] | ND | 0.0012 | mg/kg wet | | | | | | | |
| Aldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Chlordane (Total) | ND | 0.0200 | mg/kg wet | | | | | | | |
| Chlordane (Total) [2C] | ND | 0.0200 | mg/kg wet | | | | | | | |
| delta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| delta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DG40303 - 3546** | | | | | | | | | | |
| Endosulfan I | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) [2C] | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Toxaphene | ND | 0.125 | mg/kg wet | | | | | | | |
| Toxaphene [2C] | ND | 0.125 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0115* | | mg/kg wet | *0.01250* | | *92* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0109* | | mg/kg wet | *0.01250* | | *87* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0127* | | mg/kg wet | *0.01250* | | *101* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0113* | | mg/kg wet | *0.01250* | | *90* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 4,4´-DDD | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 117 | 40-140 | | | |
| 4,4´-DDD [2C] | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| 4,4´-DDE | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| 4,4´-DDE [2C] | 0.0122 | 0.0025 | mg/kg wet | 0.01250 | | 97 | 40-140 | | | |
| 4,4´-DDT | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| 4,4´-DDT [2C] | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | | | |
| Aldrin | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Aldrin [2C] | 0.0121 | 0.0025 | mg/kg wet | 0.01250 | | 97 | 40-140 | | | |
| alpha-BHC | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| alpha-BHC [2C] | 0.0124 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | | | |
| alpha-Chlordane | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | | | |
| alpha-Chlordane [2C] | 0.0115 | 0.0025 | mg/kg wet | 0.01250 | | 92 | 40-140 | | | |
| beta-BHC | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| beta-BHC [2C] | 0.0117 | 0.0025 | mg/kg wet | 0.01250 | | 93 | 40-140 | | | |
| delta-BHC | 0.0103 | 0.0025 | mg/kg wet | 0.01250 | | 82 | 40-140 | | | |
| delta-BHC [2C] | 0.0101 | 0.0025 | mg/kg wet | 0.01250 | | 81 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DG40303 - 3546** | | | | | | | | | | |
| Dieldrin | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |
| Dieldrin [2C] | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | | | |
| Endosulfan I | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | | | |
| Endosulfan I [2C] | 0.0117 | 0.0025 | mg/kg wet | 0.01250 | | 93 | 40-140 | | | |
| Endosulfan II | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| Endosulfan II [2C] | 0.0122 | 0.0025 | mg/kg wet | 0.01250 | | 98 | 40-140 | | | |
| Endosulfan Sulfate | 0.0123 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | | | |
| Endosulfan Sulfate [2C] | 0.0116 | 0.0025 | mg/kg wet | 0.01250 | | 93 | 40-140 | | | |
| Endrin | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| Endrin [2C] | 0.0123 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | | | |
| Endrin Ketone | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| Endrin Ketone [2C] | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | | | |
| gamma-BHC (Lindane) | 0.0129 | 0.0015 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| gamma-BHC (Lindane) [2C] | 0.0122 | 0.0015 | mg/kg wet | 0.01250 | | 98 | 40-140 | | | |
| gamma-Chlordane | 0.0146 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | | | |
| gamma-Chlordane [2C] | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| Heptachlor | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Heptachlor [2C] | 0.0122 | 0.0025 | mg/kg wet | 0.01250 | | 98 | 40-140 | | | |
| Heptachlor Epoxide | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Heptachlor Epoxide [2C] | 0.0120 | 0.0025 | mg/kg wet | 0.01250 | | 96 | 40-140 | | | |
| Hexachlorobenzene | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | | | |
| Hexachlorobenzene [2C] | 0.0114 | 0.0025 | mg/kg wet | 0.01250 | | 91 | 40-140 | | | |
| Methoxychlor | 0.0123 | 0.0025 | mg/kg wet | 0.01250 | | 98 | 40-140 | | | |
| Methoxychlor [2C] | 0.0113 | 0.0025 | mg/kg wet | 0.01250 | | 91 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0125* | | mg/kg wet | *0.01250* | | *100* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0117* | | mg/kg wet | *0.01250* | | *93* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0129* | | mg/kg wet | *0.01250* | | *103* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0118* | | mg/kg wet | *0.01250* | | *95* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 4,4´-DDD | 0.0149 | 0.0025 | mg/kg wet | 0.01250 | | 119 | 40-140 | 2 | 30 | |
| 4,4´-DDD [2C] | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 2 | 30 | |
| 4,4´-DDE | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | 3 | 30 | |
| 4,4´-DDE [2C] | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | 3 | 30 | |
| 4,4´-DDT | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | 1 | 30 | |
| 4,4´-DDT [2C] | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | 1 | 30 | |
| Aldrin | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 4 | 30 | |
| Aldrin [2C] | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | 4 | 30 | |
| alpha-BHC | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 3 | 30 | |
| alpha-BHC [2C] | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 4 | 30 | |
| alpha-Chlordane | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 3 | 30 | |
| alpha-Chlordane [2C] | 0.0120 | 0.0025 | mg/kg wet | 0.01250 | | 96 | 40-140 | 5 | 30 | |
| beta-BHC | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 3 | 30 | |
| beta-BHC [2C] | 0.0123 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | 6 | 30 | |
| delta-BHC | 0.0105 | 0.0025 | mg/kg wet | 0.01250 | | 84 | 40-140 | 3 | 30 | |
| delta-BHC [2C] | 0.0104 | 0.0025 | mg/kg wet | 0.01250 | | 83 | 40-140 | 3 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DG40303 - 3546** | | | | | | | | | | |
| Dieldrin | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 3 | 30 | |
| Dieldrin [2C] | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | 4 | 30 | |
| Endosulfan I | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 3 | 30 | |
| Endosulfan I [2C] | 0.0121 | 0.0025 | mg/kg wet | 0.01250 | | 97 | 40-140 | 4 | 30 | |
| Endosulfan II | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 3 | 30 | |
| Endosulfan II [2C] | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | 3 | 30 | |
| Endosulfan Sulfate | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | 2 | 30 | |
| Endosulfan Sulfate [2C] | 0.0118 | 0.0025 | mg/kg wet | 0.01250 | | 95 | 40-140 | 2 | 30 | |
| Endrin | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | 2 | 30 | |
| Endrin [2C] | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | 3 | 30 | |
| Endrin Ketone | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 1 | 30 | |
| Endrin Ketone [2C] | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | 0.9 | 30 | |
| gamma-BHC (Lindane) | 0.0133 | 0.0015 | mg/kg wet | 0.01250 | | 107 | 40-140 | 3 | 30 | |
| gamma-BHC (Lindane) [2C] | 0.0127 | 0.0015 | mg/kg wet | 0.01250 | | 102 | 40-140 | 4 | 30 | |
| gamma-Chlordane | 0.0150 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | 3 | 30 | |
| gamma-Chlordane [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 4 | 30 | |
| Heptachlor | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | 3 | 30 | |
| Heptachlor [2C] | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | 3 | 30 | |
| Heptachlor Epoxide | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 3 | 30 | |
| Heptachlor Epoxide [2C] | 0.0124 | 0.0025 | mg/kg wet | 0.01250 | | 99 | 40-140 | 4 | 30 | |
| Hexachlorobenzene | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | 3 | 30 | |
| Hexachlorobenzene [2C] | 0.0117 | 0.0025 | mg/kg wet | 0.01250 | | 93 | 40-140 | 3 | 30 | |
| Methoxychlor | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | 2 | 30 | |
| Methoxychlor [2C] | 0.0114 | 0.0025 | mg/kg wet | 0.01250 | | 91 | 40-140 | 0.7 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0120* | | mg/kg wet | *0.01250* | | *96* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0113* | | mg/kg wet | *0.01250* | | *91* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0124* | | mg/kg wet | *0.01250* | | *100* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0116* | | mg/kg wet | *0.01250* | | *93* | *30-150* | | | |
| **Batch DG40533 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 4,4´-DDD | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDD [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DG40533 - 3546** | | | | | | | | | | |
| Chlordane (Total) | ND | 0.0200 | mg/kg wet | | | | | | | |
| Chlordane (Total) [2C] | ND | 0.0200 | mg/kg wet | | | | | | | |
| delta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| delta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) [2C] | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Toxaphene | ND | 0.125 | mg/kg wet | | | | | | | |
| Toxaphene [2C] | ND | 0.125 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0128* | | mg/kg wet | *0.01250* | | *103* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0124* | | mg/kg wet | *0.01250* | | *99* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0135* | | mg/kg wet | *0.01250* | | *108* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0126* | | mg/kg wet | *0.01250* | | *101* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 4,4´-DDD | 0.0150 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | | | |
| 4,4´-DDD [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| 4,4´-DDE | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| 4,4´-DDE [2C] | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| 4,4´-DDT | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | | | |
| 4,4´-DDT [2C] | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |
| Aldrin | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| Aldrin [2C] | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| alpha-BHC | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| alpha-BHC [2C] | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DG40533 - 3546** | | | | | | | | | | |
| alpha-Chlordane | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| alpha-Chlordane [2C] | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | | | |
| beta-BHC | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| beta-BHC [2C] | 0.0123 | 0.0025 | mg/kg wet | 0.01250 | | 98 | 40-140 | | | |
| delta-BHC | 0.0106 | 0.0025 | mg/kg wet | 0.01250 | | 85 | 40-140 | | | |
| delta-BHC [2C] | 0.0109 | 0.0025 | mg/kg wet | 0.01250 | | 87 | 40-140 | | | |
| Dieldrin | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | | | |
| Dieldrin [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| Endosulfan I | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Endosulfan I [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Endosulfan II | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |
| Endosulfan II [2C] | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| Endosulfan Sulfate | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| Endosulfan Sulfate [2C] | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | | | |
| Endrin | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | | | |
| Endrin [2C] | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Endrin Ketone | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| Endrin Ketone [2C] | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | | | |
| gamma-BHC (Lindane) | 0.0133 | 0.0015 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| gamma-BHC (Lindane) [2C] | 0.0131 | 0.0015 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| gamma-Chlordane | 0.0151 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | | | |
| gamma-Chlordane [2C] | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | | | |
| Heptachlor | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| Heptachlor [2C] | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Heptachlor Epoxide | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| Heptachlor Epoxide [2C] | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| Hexachlorobenzene | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Hexachlorobenzene [2C] | 0.0122 | 0.0025 | mg/kg wet | 0.01250 | | 97 | 40-140 | | | |
| Methoxychlor | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Methoxychlor [2C] | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0126* | | mg/kg wet | *0.01250* | | *101* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0122* | | mg/kg wet | *0.01250* | | *98* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0125* | | mg/kg wet | *0.01250* | | *100* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0120* | | mg/kg wet | *0.01250* | | *96* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 4,4´-DDD | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | 1 | 30 | |
| 4,4´-DDD [2C] | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 1 | 30 | |
| 4,4´-DDE | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 1 | 30 | |
| 4,4´-DDE [2C] | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 2 | 30 | |
| 4,4´-DDT | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 0.5 | 30 | |
| 4,4´-DDT [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 0.7 | 30 | |
| Aldrin | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 2 | 30 | |
| Aldrin [2C] | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | 3 | 30 | |
| alpha-BHC | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 3 | 30 | |
| alpha-BHC [2C] | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 3 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DG40533 - 3546** | | | | | | | | | | |
| alpha-Chlordane | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 1 | 30 | |
| alpha-Chlordane [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 2 | 30 | |
| beta-BHC | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 2 | 30 | |
| beta-BHC [2C] | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | 2 | 30 | |
| delta-BHC | 0.0108 | 0.0025 | mg/kg wet | 0.01250 | | 86 | 40-140 | 2 | 30 | |
| delta-BHC [2C] | 0.0111 | 0.0025 | mg/kg wet | 0.01250 | | 89 | 40-140 | 2 | 30 | |
| Dieldrin | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 2 | 30 | |
| Dieldrin [2C] | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 2 | 30 | |
| Endosulfan I | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 2 | 30 | |
| Endosulfan I [2C] | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | 2 | 30 | |
| Endosulfan II | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 2 | 30 | |
| Endosulfan II [2C] | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | 2 | 30 | |
| Endosulfan Sulfate | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | 0.8 | 30 | |
| Endosulfan Sulfate [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 0.8 | 30 | |
| Endrin | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 2 | 30 | |
| Endrin [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 2 | 30 | |
| Endrin Ketone | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 0.2 | 30 | |
| Endrin Ketone [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 0.3 | 30 | |
| gamma-BHC (Lindane) | 0.0136 | 0.0015 | mg/kg wet | 0.01250 | | 109 | 40-140 | 2 | 30 | |
| gamma-BHC (Lindane) [2C] | 0.0134 | 0.0015 | mg/kg wet | 0.01250 | | 108 | 40-140 | 2 | 30 | |
| gamma-Chlordane | 0.0154 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | 2 | 30 | |
| gamma-Chlordane [2C] | 0.0150 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | 2 | 30 | |
| Heptachlor | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | 2 | 30 | |
| Heptachlor [2C] | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 3 | 30 | |
| Heptachlor Epoxide | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 2 | 30 | |
| Heptachlor Epoxide [2C] | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | 2 | 30 | |
| Hexachlorobenzene | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 3 | 30 | |
| Hexachlorobenzene [2C] | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | 3 | 30 | |
| Methoxychlor | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 0.4 | 30 | |
| Methoxychlor [2C] | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | 0.2 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0123* | | mg/kg wet | *0.01250* | | *98* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0120* | | mg/kg wet | *0.01250* | | *96* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0127* | | mg/kg wet | *0.01250* | | *101* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0120* | | mg/kg wet | *0.01250* | | *96* | *30-150* | | | |
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DG40831 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 2,4,5-T | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-T [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4-D | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-D [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-DB | ND | 0.048 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DG40831 - 3546** | | | | | | | | | | |
| 2,4-DB [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| Dalapon | ND | 0.046 | mg/kg wet | | | | | | | |
| Dalapon [2C] | ND | 0.046 | mg/kg wet | | | | | | | |
| Dicamba | ND | 0.009 | mg/kg wet | | | | | | | |
| Dicamba [2C] | ND | 0.009 | mg/kg wet | | | | | | | |
| Dichlorprop | ND | 0.047 | mg/kg wet | | | | | | | |
| Dichlorprop [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| Dinoseb | ND | 0.048 | mg/kg wet | | | | | | | |
| Dinoseb [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| MCPA | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPA [2C] | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPP | ND | 2.35 | mg/kg wet | | | | | | | |
| MCPP [2C] | ND | 2.35 | mg/kg wet | | | | | | | |
| *Surrogate: DCAA* | *0.172* | | mg/kg wet | *0.2000* | | *86* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.164* | | mg/kg wet | *0.2000* | | *82* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 2,4,5-T | 0.017 | 0.010 | mg/kg wet | 0.01900 | | 90 | 40-140 | | | |
| 2,4,5-T [2C] | 0.017 | 0.010 | mg/kg wet | 0.01900 | | 90 | 40-140 | | | |
| 2,4,5-TP (Silvex) | 0.017 | 0.010 | mg/kg wet | 0.01900 | | 92 | 40-140 | | | |
| 2,4,5-TP (Silvex) [2C] | 0.018 | 0.010 | mg/kg wet | 0.01900 | | 96 | 40-140 | | | |
| 2,4-D | 0.184 | 0.047 | mg/kg wet | 0.1880 | | 98 | 40-140 | | | |
| 2,4-D [2C] | 0.162 | 0.047 | mg/kg wet | 0.1880 | | 86 | 40-140 | | | |
| 2,4-DB | 0.217 | 0.048 | mg/kg wet | 0.1900 | | 114 | 40-140 | | | |
| 2,4-DB [2C] | 0.196 | 0.048 | mg/kg wet | 0.1900 | | 103 | 40-140 | | | |
| Dalapon | 0.361 | 0.046 | mg/kg wet | 0.4550 | | 79 | 40-140 | | | |
| Dalapon [2C] | 0.403 | 0.046 | mg/kg wet | 0.4550 | | 89 | 40-140 | | | |
| Dicamba | 0.015 | 0.009 | mg/kg wet | 0.01880 | | 78 | 40-140 | | | |
| Dicamba [2C] | 0.018 | 0.009 | mg/kg wet | 0.01880 | | 94 | 40-140 | | | |
| Dichlorprop | 0.231 | 0.047 | mg/kg wet | 0.1880 | | 123 | 40-140 | | | |
| Dichlorprop [2C] | 0.189 | 0.047 | mg/kg wet | 0.1880 | | 100 | 40-140 | | | |
| Dinoseb | 0.021 | 0.048 | mg/kg wet | 0.09500 | | 22 | 10-100 | | | |
| Dinoseb [2C] | 0.022 | 0.048 | mg/kg wet | 0.09500 | | 23 | 10-100 | | | |
| MCPA | 19.9 | 2.32 | mg/kg wet | 18.60 | | 107 | 40-140 | | | |
| MCPA [2C] | 20.4 | 2.32 | mg/kg wet | 18.60 | | 110 | 40-140 | | | |
| MCPP | 22.1 | 2.35 | mg/kg wet | 18.80 | | 118 | 40-140 | | | |
| MCPP [2C] | 21.0 | 2.35 | mg/kg wet | 18.80 | | 112 | 40-140 | | | |
| *Surrogate: DCAA* | *0.200* | | mg/kg wet | *0.2000* | | *100* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.185* | | mg/kg wet | *0.2000* | | *92* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 2,4,5-T | 0.016 | 0.010 | mg/kg wet | 0.01900 | | 84 | 40-140 | 7 | 30 | |
| 2,4,5-T [2C] | 0.017 | 0.010 | mg/kg wet | 0.01900 | | 88 | 40-140 | 2 | 30 | |
| 2,4,5-TP (Silvex) | 0.017 | 0.010 | mg/kg wet | 0.01900 | | 88 | 40-140 | 4 | 30 | |
| 2,4,5-TP (Silvex) [2C] | 0.017 | 0.010 | mg/kg wet | 0.01900 | | 90 | 40-140 | 6 | 30 | |
| 2,4-D | 0.171 | 0.047 | mg/kg wet | 0.1880 | | 91 | 40-140 | 7 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DG40831 - 3546** | | | | | | | | | | |
| 2,4-D [2C] | 0.160 | 0.047 | mg/kg wet | 0.1880 | | 85 | 40-140 | 1 | 30 | |
| 2,4-DB | 0.206 | 0.048 | mg/kg wet | 0.1900 | | 108 | 40-140 | 6 | 30 | |
| 2,4-DB [2C] | 0.194 | 0.048 | mg/kg wet | 0.1900 | | 102 | 40-140 | 1 | 30 | |
| Dalapon | 0.328 | 0.046 | mg/kg wet | 0.4550 | | 72 | 40-140 | 10 | 30 | |
| Dalapon [2C] | 0.387 | 0.046 | mg/kg wet | 0.4550 | | 85 | 40-140 | 4 | 30 | |
| Dicamba | 0.014 | 0.009 | mg/kg wet | 0.01880 | | 74 | 40-140 | 5 | 30 | |
| Dicamba [2C] | 0.017 | 0.009 | mg/kg wet | 0.01880 | | 88 | 40-140 | 7 | 30 | |
| Dichlorprop | 0.206 | 0.047 | mg/kg wet | 0.1880 | | 110 | 40-140 | 11 | 30 | |
| Dichlorprop [2C] | 0.182 | 0.047 | mg/kg wet | 0.1880 | | 97 | 40-140 | 3 | 30 | |
| Dinoseb | 0.021 | 0.048 | mg/kg wet | 0.09500 | | 22 | 10-100 | 2 | 30 | |
| Dinoseb [2C] | 0.022 | 0.048 | mg/kg wet | 0.09500 | | 23 | 10-100 | 2 | 30 | |
| MCPA | 17.8 | 2.32 | mg/kg wet | 18.60 | | 96 | 40-140 | 11 | 30 | |
| MCPA [2C] | 19.2 | 2.32 | mg/kg wet | 18.60 | | 103 | 40-140 | 6 | 30 | |
| MCPP | 19.7 | 2.35 | mg/kg wet | 18.80 | | 105 | 40-140 | 12 | 30 | |
| MCPP [2C] | 20.2 | 2.35 | mg/kg wet | 18.80 | | 107 | 40-140 | 4 | 30 | |
| *Surrogate: DCAA* | *0.175* | | mg/kg wet | *0.2000* | | *87* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.168* | | mg/kg wet | *0.2000* | | *84* | *30-150* | | | |
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DG40305 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *3.93* | | mg/kg wet | *5.000* | | *79* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.7 | 0.2 | mg/kg wet | 2.500 | | 69 | 40-140 | | | |
| Docosane (C22) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Dodecane (C12) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| Eicosane (C20) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Hexacosane (C26) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Hexadecane (C16) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DG40305 - 3546** | | | | | | | | | | |
| Nonadecane (C19) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Nonane (C9) | 1.5 | 0.2 | mg/kg wet | 2.500 | | 61 | 30-140 | | | |
| Octacosane (C28) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Octadecane (C18) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Tetracosane (C24) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Tetradecane (C14) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 28.9 | 10.0 | mg/kg wet | 35.00 | | 82 | 40-140 | | | |
| Triacontane (C30) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *3.96* | | mg/kg wet | *5.000* | | *79* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | 4 | 25 | |
| Docosane (C22) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 1 | 25 | |
| Dodecane (C12) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 4 | 25 | |
| Eicosane (C20) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 83 | 40-140 | 2 | 25 | |
| Hexacosane (C26) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | 1 | 25 | |
| Hexadecane (C16) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 81 | 40-140 | 3 | 25 | |
| Hexatriacontane (C36) | 2.5 | 0.2 | mg/kg wet | 2.500 | | 100 | 40-140 | 2 | 25 | |
| Nonadecane (C19) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | 3 | 25 | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 63 | 30-140 | 4 | 25 | |
| Octacosane (C28) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 88 | 40-140 | 2 | 25 | |
| Octadecane (C18) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 2 | 25 | |
| Tetracosane (C24) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 1 | 25 | |
| Tetradecane (C14) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 80 | 40-140 | 4 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 29.6 | 10.0 | mg/kg wet | 35.00 | | 84 | 40-140 | 2 | 25 | |
| Triacontane (C30) | 2.3 | 0.2 | mg/kg wet | 2.500 | | 90 | 40-140 | 2 | 25 | |
| *Surrogate: O-Terphenyl* | *3.98* | | mg/kg wet | *5.000* | | *80* | *40-140* | | | |
| **Batch DG40339 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *3.87* | | mg/kg wet | *5.000* | | *77* | *40-140* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DG40339 - 3546** | | | | | | | | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.7 | 0.2 | mg/kg wet | 2.500 | | 69 | 40-140 | | | |
| Docosane (C22) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| Dodecane (C12) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Eicosane (C20) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | | | |
| Hexacosane (C26) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Hexadecane (C16) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | | | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Nonadecane (C19) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 63 | 30-140 | | | |
| Octacosane (C28) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Octadecane (C18) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Tetracosane (C24) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| Tetradecane (C14) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 26.8 | 10.0 | mg/kg wet | 35.00 | | 76 | 40-140 | | | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *3.56* | | mg/kg wet | *5.000* | | *71* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 71 | 40-140 | 3 | 25 | |
| Docosane (C22) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 81 | 40-140 | 7 | 25 | |
| Dodecane (C12) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | 3 | 25 | |
| Eicosane (C20) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | 7 | 25 | |
| Hexacosane (C26) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | 6 | 25 | |
| Hexadecane (C16) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 6 | 25 | |
| Hexatriacontane (C36) | 2.6 | 0.2 | mg/kg wet | 2.500 | | 102 | 40-140 | 6 | 25 | |
| Nonadecane (C19) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | 7 | 25 | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 65 | 30-140 | 4 | 25 | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 5 | 25 | |
| Octadecane (C18) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 7 | 25 | |
| Tetracosane (C24) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | 7 | 25 | |
| Tetradecane (C14) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | 5 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 28.1 | 10.0 | mg/kg wet | 35.00 | | 80 | 40-140 | 5 | 25 | |
| Triacontane (C30) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | 3 | 25 | |
| *Surrogate: O-Terphenyl* | *3.83* | | mg/kg wet | *5.000* | | *77* | *40-140* | | | |
| **Classical Chemistry** | | | | | | | | | | |
| **Batch DG40328 - General Preparation** | | | | | | | | | | |
| **Reference** | | | | | | | | | | |
| Flashpoint | 81 | | °F | 81.00 | | 100 | 97.9-102.1 | | | |
| **Batch DG40336 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Reactive Cyanide | ND | 2.0 | mg/kg | | | | | | | |
| Reactive Sulfide | ND | 2.0 | mg/kg | | | | | | | |
| **LCS** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Classical Chemistry** | | | | | | | | | | |
| **Batch DG40336 - General Preparation** | | | | | | | | | | |
| Reactive Cyanide | 4.1 | 2.0 | mg/kg | 100.3 | | 4 | 0.68-5.41 | | | |
| Reactive Sulfide | 2.2 | 2.0 | mg/kg | 10.00 | | 22 | 0-44 | | | |
| **Batch DG40348 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Conductivity | ND | 5 | umhos/cm | | | | | | | |
| **LCS** | | | | | | | | | | |
| Conductivity | 1390 | | umhos/cm | 1410 | | 99 | 90-110 | | | |
| **Batch DG40349 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Conductivity | ND | 5 | umhos/cm | | | | | | | |
| **LCS** | | | | | | | | | | |
| Conductivity | 1390 | | umhos/cm | 1410 | | 98 | 90-110 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

**Notes and Definitions**

| | |
|---|---|
| WL | Results obtained from a deionized water leach of the sample. |
| U | Analyte included in the analysis, but not detected |
| RRF | Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration |
| Q | Calibration required quadratic regression (Q). |
| PT | Pentachlorophenol tailing factor > 2. |
| P | Percent difference between primary and confirmation results exceeds 40% (P). |
| LC | Lower value is used due to matrix interferences (LC). |
| EL | Elevated Method Reporting Limits due to sample matrix (EL). |
| D+ | Relative percent difference for duplicate is outside of criteria (D+). |
| D | Diluted. |
| CD+ | Continuing Calibration %Diff/Drift is above control limit (CD+). |
| BT | Benzidine tailing factor >2. |
| > | Greater than. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0131

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24G0131
Date Received: 7/2/2024
Project Due Date: 7/10/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 2.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** (Yes) / No / NA
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? (Yes) / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? (Yes) / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered
    c. Low Level VOA vials frozen: Date: 7/2/24 Time: (1:39 Yes / No To Be Lab Filtered By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 568794 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 1 | 568795 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 1 | 568796 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 2 | 568797 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 568798 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 568799 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 568800 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 3 | 568801 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 3 | 568802 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 4 | 568803 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 568804 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 568805 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 568806 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 5 | 568807 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 5 | 568808 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 6 | 568809 | Yes | N/A | Yes | 8 oz jar | NP | |
| 6 | 568810 | Yes | N/A | Yes | 8 oz jar | NP | |
| 6 | 568811 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 568812 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 7 | 568813 | Yes | N/A | Yes | VOA Vial | DI Water | |

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24G0131
Date Received: 7/2/2024

| | | | | | | |
|---|---|---|---|---|---|---|
| 7 | 568814 | Yes | N/A | Yes | VOA Vial | DI Water |
| 8 | 568815 | Yes | N/A | Yes | 8 oz jar | NP |
| 8 | 568816 | Yes | N/A | Yes | 8 oz jar | NP |
| 8 | 568817 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 9 | 568818 | Yes | N/A | Yes | VOA Vial | MeOH |
| 9 | 568819 | Yes | N/A | Yes | VOA Vial | DI Water |
| 9 | 568820 | Yes | N/A | Yes | VOA Vial | DI Water |
| 10 | 568821 | Yes | N/A | Yes | 8 oz jar | NP |
| 10 | 568822 | Yes | N/A | Yes | 8 oz jar | NP |
| 10 | 568823 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 11 | 568824 | Yes | N/A | Yes | VOA Vial | MeOH |
| 11 | 568825 | Yes | N/A | Yes | VOA Vial | DI Water |
| 11 | 568826 | Yes | N/A | Yes | VOA Vial | DI Water |
| 12 | 568827 | Yes | N/A | Yes | 8 oz jar | NP |
| 12 | 568828 | Yes | N/A | Yes | 8 oz jar | NP |
| 12 | 568829 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 13 | 568830 | Yes | N/A | Yes | VOA Vial | MeOH |
| 13 | 568831 | Yes | N/A | Yes | VOA Vial | DI Water |
| 13 | 568832 | Yes | N/A | Yes | VOA Vial | DI Water |
| 14 | 568833 | Yes | N/A | Yes | 8 oz jar | NP |
| 14 | 568834 | Yes | N/A | Yes | 8 oz jar | NP |
| 14 | 568835 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 15 | 568836 | Yes | N/A | Yes | VOA Vial | MeOH |
| 15 | 568837 | Yes | N/A | Yes | VOA Vial | DI Water |
| 15 | 568838 | Yes | N/A | Yes | VOA Vial | DI Water |
| 16 | 568839 | Yes | N/A | Yes | 8 oz jar | NP |
| 16 | 568840 | Yes | N/A | Yes | 8 oz jar | NP |
| 16 | 568841 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 17 | 568842 | Yes | N/A | Yes | VOA Vial | MeOH |
| 17 | 568843 | Yes | N/A | Yes | VOA Vial | DI Water |
| 17 | 568844 | Yes | N/A | Yes | VOA Vial | DI Water |
| 18 | 568845 | Yes | N/A | Yes | 8 oz jar | NP |
| 18 | 568846 | Yes | N/A | Yes | 8 oz jar | NP |
| 18 | 568847 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 19 | 568848 | Yes | N/A | Yes | VOA Vial | MeOH |
| 19 | 568849 | Yes | N/A | Yes | VOA Vial | DI Water |
| 19 | 568850 | Yes | N/A | Yes | VOA Vial | DI Water |
| 20 | 568851 | Yes | N/A | Yes | 8 oz jar | NP |
| 20 | 568852 | Yes | N/A | Yes | 8 oz jar | NP |
| 20 | 568853 | Yes | N/A | Yes | 4 oz. Jar | NP |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials MM — Yes / No

Are barcode labels on correct containers? Yes / No / NA

Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA

Are all Hex Chrome stickers attached? Yes / No / NA

Are all QC stickers attached? Yes / No / NA

Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: _____ Date & Time: 7/2/24 1752

Reviewed By: _____ Date & Time: 7/3/24 1813

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 2460131

| | | |
|---|---|---|
| **Turn Time** | 5 | Days |
| **Regulatory State** | Massachusetts | |
| **Is this project for any of the following?:** | ○ CT RCP ◉ MA MCP ○ RGP | |
| **Reporting Limits** | | |
| **Electonic Deliverables** | ☑ Data Checker ☑ Other (Please Specify →) | ☑ Excel EDD |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 3 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, hadam@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | RCRA8 Metals | PCB | TPH | SVOC - incl pyr | Pest - incl Tox | Herbicides | Reactivity | Conductivity | pH | Free Liquid | Flashpoint | VOC - high | VOC - low |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7/1/24 | 14:10 | Grab | Soil | Y-0.5 | | | | | | | | | | | | X | X |
| 2 | | 14:10 | Comp | Soil | Y-0.5 | X | X | X | X | X | X | X | X | X | X | X | | |
| 3 | | 14:00 | Grab | Soil | W-0.5 | | | | | | | | | | | | X | X |
| 4 | | 14:00 | Comp | Soil | W-0.5 | X | X | X | X | X | X | X | X | X | X | X | | |
| 5 | | 14:20 | Grab | Soil | U-0.5 | | | | | | | | | | | | X | X |
| 6 | | 14:20 | Comp | Soil | U-0.5 | X | X | X | X | X | X | X | X | X | X | X | | |
| 7 | | 14:40 | Grab | Soil | S-0.5 | | | | | | | | | | | | X | X |
| 8 | | 14:40 | Comp | Soil | S-0.5 | X | X | X | X | X | X | X | X | X | X | X | | |
| 9 | | 15:00 | Grab | Soil | Q-0.5 | | | | | | | | | | | | X | X |
| 10 | ↓ | 15:00 | Comp | Soil | Q-0.5 | X | X | X | X | X | X | X | X | X | X | X | | |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | V | V |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 7 | 7 |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 10 |
| | | | | | | | | | **Number of Containers per Sample:** | 1 | | | | | 1 | | | | | 1 | 1 | 2 |

**Laboratory Use Only**

Cooler Present: yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 2.1 °C Ice

**Sampled by :** CI

**Comments:** Please specify "Other" preservative and containers types in this space

Run TCLP if fails 20x

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| Cassia Dal Bello 7/2/24 15:00 | 7/2/24 18:20 | 7/2/24 16:25 | 7/2/24 1625 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 2460131

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Is this project for any of the following?: | ○ CT RCP ◉ MA MCP ○ RGP | |
| Reporting Limits | | |
| Electonic Deliverables | ☑ Data Checker ☑ Other (Please Specify →) | ☑ Excel EDD |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 3 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello; jkitchen, hadam@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: RCRA8 Metals | PCB | TPH | SVOC - incl pyr | Pest - incl Tox | Herbicides | Reactivity | Conductivity | pH | Free Liquid | Flashpoint | VOC - high | VOC - low |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 7/1/24 | 12:15 | Grab | Soil | A'-5 | | | | | | | | | | | | X | X |
| 12 | | 12:15 | Comp | Soil | A'-5 | X | X | X | X | X | X | X | X | X | X | X | | |
| 13 | | 12:30 | Grab | Soil | A'-7 | | | | | | | | | | | | X | X |
| 14 | | 12:30 | Comp | Soil | A'-7 | X | X | X | X | X | X | X | X | X | X | X | | |
| 15 | | 13:10 | Grab | Soil | Y-5 | | | | | | | | | | | | X | X |
| 16 | | 13:10 | Comp | Soil | Y-5 | X | X | X | X | X | X | X | X | X | X | X | | |
| 17 | | 13:20 | Grab | Soil | Y-7 | | | | | | | | | | | | X | X |
| 18 | | 13:20 | Comp | Soil | Y-7 | X | X | X | X | X | X | X | X | X | X | X | | |
| 19 | | 13:40 | Grab | Soil | Y-3 | | | | | | | | | | | | X | X |
| 20 | ↓ | 13:40 | Comp | Soil | Y-3 | X | X | X | X | X | X | X | X | X | X | X | | |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Container Type:** | AC-Air Cassette | AG-Amber Glass | B-BOD Bottle | C-Cubitainer | J-Jar | O-Other | P-Poly | S-Sterile | V-Vial | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | V | V |
| **Container Volume:** | 1-100 mL | 2-2.5 gal | 3-250 mL | 4-300 mL | 5-500 mL | 6-1L | 7-VOA | 8-2 oz | 9-4 oz | 10-8 oz | 11-Other* | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 7 | 7 |
| **Preservation Code:** | 1-Non Preserved | 2-HCl | 3-H2SO4 | 4-HNO3 | 5-NaOH | 6-Methanol | 7-Na2S2O3 | 8-ZnAce, NaOH | 9-NH4Cl | 10-DI H2O | 11-Other* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 10 |
| | | | | | | | | | | | **Number of Containers per Sample:** | 1 | | | | | 1 | | | | | 1 | 1 | 2 |

**Laboratory Use Only**

Cooler Present: 4C's ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 2.1 °C IR

**Sampled by :** CI

**Comments:** Please specify "Other" preservative and containers types in this space

Run TCLP if fails 20x

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 7/2/24 15:00 | 7/2/24 15:00 | 7/2/24 16:05 | 7/2/24 1625 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 3 (332-344)**
**ESS Laboratory Work Order Number: 24G0132**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 6:20 pm, Jul 11, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

## SAMPLE RECEIPT

The following samples were received on July 02, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

**Low Level VOA vials were frozen by ESS Laboratory on July 2, 2024 at 18:32.**
**Tetrahydrofuran is reported above the MA CAM reporting limit of 0.010 mg/kg.**

**Question I: All samples for metals and EPH were analyzed for a subset of the required MCP list per the client's request.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24G0132-01 | C-5 | Soil | 8260D Low |
| 24G0132-02 | C-5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0132-03 | C-3 | Soil | 8260D Low |
| 24G0132-04 | C-3 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0132-05 | C-1 | Soil | 8260D Low |
| 24G0132-06 | C-1 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0132-07 | A-1 | Soil | 8260D Low |
| 24G0132-08 | A-1 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

| | | | |
|---|---|---|---|
| 24G0132-09 | A-3 | Soil | 8260D Low |
| 24G0132-10 | A-3 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0132-11 | E-1 | Soil | 8260D Low |
| 24G0132-12 | E-1 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0132-13 | E-3 | Soil | 8260D Low |
| 24G0132-14 | E-3 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0132-15 | E-5 | Soil | 8260D Low |
| 24G0132-16 | E-5 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0132-17 | E-7 | Soil | 8260D Low |
| 24G0132-18 | E-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |
| 24G0132-19 | C-7 | Soil | 8260D Low |
| 24G0132-20 | C-7 | Soil | 1010A, 2550B, 6010D, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270E, 9045, 9050A, 9095A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

## PROJECT NARRATIVE

**8151A Chlorinated Herbicides**

D4G0206-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
Dinoseb [2C] (19% @ 15%)

D4G0206-CCV2 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
Dinoseb [2C] (24% @ 15%)

D4G0206-CCV3 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
Dinoseb [2C] (23% @ 15%)

D4G0206-CCV4 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
Dinoseb [2C] (28% @ 15%)

D4G0206-CCV5 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
Dinoseb [2C] (28% @ 15%), MCPP [2C] (18% @ 15%)

**Semi-Volatile Organic Compounds**

D4G0113-CCV1 **Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration**
2,4-Dinitrophenol (70% @ 40-160%)

D4G0113-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (70% @ 40-160%), Pentachlorophenol (84% @ 40-160%)

D4G0113-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
Di-n-octylphthalate (23% @ 20%)

D4G0113-TUN1 **Benzidine tailing factor >2.**

DG40337-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
2,4-Dinitrophenol (44% @ 30%)

**Total Metals**

24G0132-02 **Elevated Method Reporting Limits due to sample matrix (EL).**
Arsenic

24G0132-04 **Elevated Method Reporting Limits due to sample matrix (EL).**
Arsenic

24G0132-06 **Elevated Method Reporting Limits due to sample matrix (EL).**
Arsenic

24G0132-08 **Elevated Method Reporting Limits due to sample matrix (EL).**
Arsenic

24G0132-10 **Elevated Method Reporting Limits due to sample matrix (EL).**
Arsenic

24G0132-12 **Elevated Method Reporting Limits due to sample matrix (EL).**
Arsenic

24G0132-14 **Elevated Method Reporting Limits due to sample matrix (EL).**
Arsenic

24G0132-16 **Elevated Method Reporting Limits due to sample matrix (EL).**
Arsenic

24G0132-18 **Elevated Method Reporting Limits due to sample matrix (EL).**

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

Arsenic

24G0132-20 **Elevated Method Reporting Limits due to sample matrix (EL).**
Arsenic

**Volatile Organics Low Level**

D4G0074-CCV1 **Calibration required quadratic regression (Q).**
Bromoform (93% @ 40-160%), trans-1,3-Dichloropropene (99% @ 80-120%)

D4G0083-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
1,4-Dioxane (39% @ 20%), Diethyl Ether (27% @ 20%), Ethyl tertiary-butyl ether (21% @ 20%), Tertiary-amyl methyl ether (22% @ 20%), Tetrahydrofuran (38% @ 20%)

DG40306-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
Acetone (34% @ 20%)

DG40319-BS1 **Blank Spike recovery is above upper control limit (B+).**
Diethyl Ether (133% @ 70-130%), Isopropylbenzene (131% @ 70-130%), Tertiary-amyl methyl ether (131% @ 70-130%)

DG40319-BSD1 **Blank Spike recovery is above upper control limit (B+).**
1,4-Dioxane (133% @ 70-130%), Diethyl Ether (132% @ 70-130%), Isopropylbenzene (148% @ 70-130%), tert-Butylbenzene (131% @ 70-130%), Tetrahydrofuran (131% @ 70-130%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24G0132-01 through 24G0132-20**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| (x) 8260 VOC CAM II A | (x) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| (x) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | (x) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| (x) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | (x) MassDEP EPH CAM IV B | (x) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes (x) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes ( ) No (x)* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes ( ) No (x)* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: July 11, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-5
Date Sampled: 07/01/24 11:10
Percent Solids: 93
Initial Volume: 5.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,1,1-Trichloroethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,1,2,2-Tetrachloroethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,1,2-Trichloroethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,1-Dichloroethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,1-Dichloroethene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,1-Dichloropropene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,2,3-Trichlorobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,2,3-Trichloropropane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,2,4-Trichlorobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,2,4-Trimethylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,2-Dibromoethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,2-Dichlorobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,2-Dichloroethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,2-Dichloropropane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,3,5-Trimethylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,3-Dichlorobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,3-Dichloropropane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,4-Dichlorobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 1,4-Dioxane | ND (0.0991) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 2,2-Dichloropropane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 2-Butanone | ND (0.0495) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 2-Chlorotoluene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 2-Hexanone | ND (0.0495) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 4-Chlorotoluene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| 4-Isopropyltoluene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-5
Date Sampled: 07/01/24 11:10
Percent Solids: 93
Initial Volume: 5.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0495) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Acetone | ND (0.0495) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Benzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Bromobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Bromochloromethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Bromodichloromethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Bromoform | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Bromomethane | ND (0.0099) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Carbon Disulfide | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Carbon Tetrachloride | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Chlorobenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Chloroethane | ND (0.0099) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Chloroform | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Chloromethane | ND (0.0099) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| cis-1,2-Dichloroethene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| cis-1,3-Dichloropropene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Dibromochloromethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Dibromomethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Dichlorodifluoromethane | ND (0.0099) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Diethyl Ether | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Di-isopropyl ether | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Ethyl tertiary-butyl ether | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Ethylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Hexachlorobutadiene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Isopropylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Methyl tert-Butyl Ether | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Methylene Chloride | ND (0.0248) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-5
Date Sampled: 07/01/24 11:10
Percent Solids: 93
Initial Volume: 5.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| n-Butylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| n-Propylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| sec-Butylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Styrene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| tert-Butylbenzene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Tertiary-amyl methyl ether | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Tetrachloroethene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Tetrahydrofuran | ND (0.0198) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Toluene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| trans-1,2-Dichloroethene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| trans-1,3-Dichloropropene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Trichloroethene | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Trichlorofluoromethane | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Vinyl Chloride | ND (0.0099) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Xylene O | ND (0.0050) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Xylene P,M | ND (0.0099) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |
| Xylenes (Total) | ND (0.0099) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:04 | D4G0074 | DG40306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *111 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *93 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *98 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *100 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-5
Date Sampled: 07/01/24 11:10
Percent Solids: 93

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.21) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:16 | 2.42 100 | DG40518 |
| **Barium** | **30.8** (0.88) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:16 | 2.42 100 | DG40518 |
| Cadmium | ND (0.44) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:16 | 2.42 100 | DG40518 |
| **Chromium** | **7.13** (0.88) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:16 | 2.42 100 | DG40518 |
| **Lead** | **73.7** (4.42) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:16 | 2.42 100 | DG40518 |
| **Mercury** | **0.050** (0.033) | --- | 7471B | --- | 1 | AFV | 07/08/24 18:57 | 0.65 40 | DG40816 |
| Selenium | ND (4.42) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:16 | 2.42 100 | DG40518 |
| Silver | ND (0.44) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:16 | 2.42 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-5
Date Sampled: 07/01/24 11:10
Percent Solids: 93
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 1,2,4-Trichlorobenzene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 1,2-Dichlorobenzene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 1,3-Dichlorobenzene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 1,4-Dichlorobenzene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 2,4,5-Trichlorophenol | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 2,4,6-Trichlorophenol | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 2,4-Dichlorophenol | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 2,4-Dimethylphenol | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 2,4-Dinitrophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 2,4-Dinitrotoluene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 2,6-Dinitrotoluene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 2-Chloronaphthalene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 2-Chlorophenol | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 2-Methylnaphthalene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 2-Methylphenol | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 2-Nitrophenol | ND (0.532) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 3,3´-Dichlorobenzidine | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 3+4-Methylphenol | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 4-Bromophenyl-phenylether | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 4-Chloroaniline | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| 4-Nitrophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Acenaphthene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Acenaphthylene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Acetophenone | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Aniline | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Anthracene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-5
Date Sampled: 07/01/24 11:10
Percent Solids: 93
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Benzo(a)anthracene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Benzo(a)pyrene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Benzo(b)fluoranthene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Benzo(g,h,i)perylene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Benzo(k)fluoranthene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| bis(2-Chloroethoxy)methane | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| bis(2-Chloroethyl)ether | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| bis(2-chloroisopropyl)Ether | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| bis(2-Ethylhexyl)phthalate | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Butylbenzylphthalate | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Chrysene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Dibenzo(a,h)Anthracene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Dibenzofuran | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Diethylphthalate | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Dimethylphthalate | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Di-n-butylphthalate | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Di-n-octylphthalate | ND (0.532) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Fluoranthene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Fluorene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Hexachlorobenzene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Hexachlorobutadiene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Hexachloroethane | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Indeno(1,2,3-cd)Pyrene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Isophorone | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Naphthalene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Nitrobenzene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-5
Date Sampled: 07/01/24 11:10
Percent Solids: 93
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Pentachlorophenol | ND (1.06) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Phenanthrene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Phenol | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Pyrene | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |
| Pyridine | ND (0.266) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:20 | D4G0113 | DG40337 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *93 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *85 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *96 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *98 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *84 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *90 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *83 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *109 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-5
Date Sampled: 07/01/24 11:10
Percent Solids: 93
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 19:31 | --- | DG40302 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 19:31 | --- | DG40302 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 19:31 | --- | DG40302 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 19:31 | --- | DG40302 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 19:31 | --- | DG40302 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 07/05/24 19:31 | --- | DG40302 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 19:31 | --- | DG40302 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 19:31 | --- | DG40302 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 19:31 | --- | DG40302 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *88 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-5
Date Sampled: 07/01/24 11:10
Percent Solids: 93
Initial Volume: 19.7g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/5/24 14:51

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| Chlordane (Total) | ND (0.0217) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |
| Toxaphene | ND (0.136) | --- | 8081B | --- | 1 | 07/08/24 19:17 | D4G0160 | DG40533 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-5
Date Sampled: 07/01/24 11:10
Percent Solids: 93
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/9/24 16:40

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 7:48 | D4G0206 | DG40931 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 7:48 | D4G0206 | DG40931 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 7:48 | D4G0206 | DG40931 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 7:48 | D4G0206 | DG40931 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 07/11/24 7:48 | D4G0206 | DG40931 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 7:48 | D4G0206 | DG40931 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 7:48 | D4G0206 | DG40931 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 7:48 | D4G0206 | DG40931 |
| MCPA | ND (2.41) | --- | 8151A | --- | 1 | 07/11/24 7:48 | D4G0206 | DG40931 |
| MCPP | ND (2.44) | --- | 8151A | --- | 1 | 07/11/24 7:48 | D4G0206 | DG40931 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *59 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-5
Date Sampled: 07/01/24 11:10
Percent Solids: 93
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 15:55

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **17.0** (10.9) | --- | 8100M | --- | 1 | 07/10/24 3:57 | --- | DG40339 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *84 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-5
Date Sampled: 07/01/24 11:10
Percent Solids: 93

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-02
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 272** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:48 | umhos/cm | DG40349 |
| **Corrosivity (pH)** | **8.20** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40257 |
| **Corrosivity (pH) Sample Temp** | **21.6** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40257 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | EAM | 07/02/24 20:32 | °F | DG40254 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 18:02 | ml/5 min | DG40354 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-3
Date Sampled: 07/01/24 11:25
Percent Solids: 89
Initial Volume: 5.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,1,1-Trichloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,1,2,2-Tetrachloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,1,2-Trichloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,1-Dichloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,1-Dichloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,1-Dichloropropene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,2,3-Trichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,2,3-Trichloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,2,4-Trichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,2,4-Trimethylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,2-Dibromoethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,2-Dichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,2-Dichloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,2-Dichloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,3,5-Trimethylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,3-Dichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,3-Dichloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,4-Dichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 1,4-Dioxane | ND (0.102) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 2,2-Dichloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 2-Butanone | ND (0.0509) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 2-Chlorotoluene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 2-Hexanone | ND (0.0509) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 4-Chlorotoluene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| 4-Isopropyltoluene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-3
Date Sampled: 07/01/24 11:25
Percent Solids: 89
Initial Volume: 5.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0509) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Acetone | ND (0.0509) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Benzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Bromobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Bromochloromethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Bromodichloromethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Bromoform | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Bromomethane | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Carbon Disulfide | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Carbon Tetrachloride | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Chlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Chloroethane | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Chloroform | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Chloromethane | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| cis-1,2-Dichloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| cis-1,3-Dichloropropene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Dibromochloromethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Dibromomethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Dichlorodifluoromethane | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Diethyl Ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Di-isopropyl ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Ethyl tertiary-butyl ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Ethylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Hexachlorobutadiene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Isopropylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Methyl tert-Butyl Ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Methylene Chloride | ND (0.0254) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-3
Date Sampled: 07/01/24 11:25
Percent Solids: 89
Initial Volume: 5.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| n-Butylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| n-Propylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| sec-Butylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Styrene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| tert-Butylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Tertiary-amyl methyl ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Tetrachloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Tetrahydrofuran | ND (0.0203) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Toluene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| trans-1,2-Dichloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| trans-1,3-Dichloropropene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Trichloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Trichlorofluoromethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Vinyl Chloride | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Xylene O | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Xylene P,M | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |
| Xylenes (Total) | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:30 | D4G0074 | DG40306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *112 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *93 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *98 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-3
Date Sampled: 07/01/24 11:25
Percent Solids: 89

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.51) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:18 | 2.23 100 | DG40518 |
| **Barium** | **9.16** (1.00) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:18 | 2.23 100 | DG40518 |
| Cadmium | ND (0.50) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:18 | 2.23 100 | DG40518 |
| **Chromium** | **7.21** (1.00) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:18 | 2.23 100 | DG40518 |
| **Lead** | **12.2** (5.02) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:18 | 2.23 100 | DG40518 |
| Mercury | ND (0.036) | --- | 7471B | --- | 1 | AFV | 07/08/24 19:08 | 0.61 40 | DG40816 |
| Selenium | ND (5.02) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:18 | 2.23 100 | DG40518 |
| Silver | ND (0.50) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:18 | 2.23 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-3
Date Sampled: 07/01/24 11:25
Percent Solids: 89
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 1,2,4-Trichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 1,2-Dichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 1,3-Dichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 1,4-Dichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 2,4,5-Trichlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 2,4,6-Trichlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 2,4-Dichlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 2,4-Dimethylphenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 2,4-Dinitrophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 2,4-Dinitrotoluene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 2,6-Dinitrotoluene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 2-Chloronaphthalene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 2-Chlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 2-Methylnaphthalene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 2-Methylphenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 2-Nitrophenol | ND (0.546) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 3,3´-Dichlorobenzidine | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 3+4-Methylphenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 4-Bromophenyl-phenylether | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 4-Chloroaniline | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| 4-Nitrophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Acenaphthene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Acenaphthylene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Acetophenone | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Aniline | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Anthracene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-3
Date Sampled: 07/01/24 11:25
Percent Solids: 89
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Benzo(a)anthracene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Benzo(a)pyrene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Benzo(b)fluoranthene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Benzo(g,h,i)perylene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Benzo(k)fluoranthene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| bis(2-Chloroethoxy)methane | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| bis(2-Chloroethyl)ether | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| bis(2-chloroisopropyl)Ether | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| bis(2-Ethylhexyl)phthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Butylbenzylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Chrysene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Dibenzo(a,h)Anthracene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Dibenzofuran | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Diethylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Dimethylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Di-n-butylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Di-n-octylphthalate | ND (0.546) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Fluoranthene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Fluorene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Hexachlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Hexachlorobutadiene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Hexachloroethane | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Indeno(1,2,3-cd)Pyrene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Isophorone | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Naphthalene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Nitrobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-3
Date Sampled: 07/01/24 11:25
Percent Solids: 89
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Pentachlorophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Phenanthrene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Phenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Pyrene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |
| Pyridine | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/05/24 22:50 | D4G0113 | DG40337 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *94 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *84 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *97 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *98 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *86 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *94 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *84 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *114 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-3
Date Sampled: 07/01/24 11:25
Percent Solids: 89
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 19:51 | --- | DG40302 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 19:51 | --- | DG40302 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 19:51 | --- | DG40302 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 19:51 | --- | DG40302 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 19:51 | --- | DG40302 |
| **Aroclor 1254 [2C]** | **0.1** (0.06) | --- | 8082A | --- | 1 | 07/05/24 19:51 | --- | DG40302 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 19:51 | --- | DG40302 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 19:51 | --- | DG40302 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 19:51 | --- | DG40302 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *71 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-3
Date Sampled: 07/01/24 11:25
Percent Solids: 89
Initial Volume: 20.5g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/5/24 14:51

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| Chlordane (Total) | ND (0.0218) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |
| Toxaphene | ND (0.136) | --- | 8081B | --- | 1 | 07/08/24 20:40 | D4G0160 | DG40533 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *89 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-3
Date Sampled: 07/01/24 11:25
Percent Solids: 89
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/9/24 16:40

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 8:14 | D4G0206 | DG40931 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 8:14 | D4G0206 | DG40931 |
| 2,4-D | ND (0.052) | --- | 8151A | --- | 1 | 07/11/24 8:14 | D4G0206 | DG40931 |
| 2,4-DB | ND (0.052) | --- | 8151A | --- | 1 | 07/11/24 8:14 | D4G0206 | DG40931 |
| Dalapon | ND (0.050) | --- | 8151A | --- | 1 | 07/11/24 8:14 | D4G0206 | DG40931 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 8:14 | D4G0206 | DG40931 |
| Dichlorprop | ND (0.052) | --- | 8151A | --- | 1 | 07/11/24 8:14 | D4G0206 | DG40931 |
| Dinoseb | ND (0.052) | --- | 8151A | --- | 1 | 07/11/24 8:14 | D4G0206 | DG40931 |
| MCPA | ND (2.55) | --- | 8151A | --- | 1 | 07/11/24 8:14 | D4G0206 | DG40931 |
| MCPP | ND (2.58) | --- | 8151A | --- | 1 | 07/11/24 8:14 | D4G0206 | DG40931 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *51 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-3
Date Sampled: 07/01/24 11:25
Percent Solids: 89
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 15:55

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (11.2) | --- | 8100M | --- | 1 | 07/09/24 20:22 | --- | DG40339 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *72 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-3
Date Sampled: 07/01/24 11:25
Percent Solids: 89

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-04
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 321** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:48 | umhos/cm | DG40349 |
| **Corrosivity (pH)** | **6.87** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40257 |
| **Corrosivity (pH) Sample Temp** | **21.5** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40257 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | EAM | 07/02/24 20:32 | °F | DG40254 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 18:02 | ml/5 min | DG40354 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-1
Date Sampled: 07/01/24 11:35
Percent Solids: 94
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,1,1-Trichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,1,2,2-Tetrachloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,1,2-Trichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,1-Dichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,1-Dichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,1-Dichloropropene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,2,3-Trichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,2,3-Trichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,2,4-Trichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,2,4-Trimethylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,2-Dibromoethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,2-Dichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,2-Dichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,2-Dichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,3,5-Trimethylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,3-Dichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,3-Dichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,4-Dichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 1,4-Dioxane | ND (0.0901) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 2,2-Dichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 2-Butanone | ND (0.0450) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 2-Chlorotoluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 2-Hexanone | ND (0.0450) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 4-Chlorotoluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| 4-Isopropyltoluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-1
Date Sampled: 07/01/24 11:35
Percent Solids: 94
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0450) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Acetone | ND (0.0450) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Benzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Bromobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Bromochloromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Bromodichloromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Bromoform | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Bromomethane | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Carbon Disulfide | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Carbon Tetrachloride | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Chlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Chloroethane | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Chloroform | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Chloromethane | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| cis-1,2-Dichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| cis-1,3-Dichloropropene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Dibromochloromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Dibromomethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Dichlorodifluoromethane | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Diethyl Ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Di-isopropyl ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Ethyl tertiary-butyl ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Ethylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Hexachlorobutadiene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Isopropylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Methyl tert-Butyl Ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Methylene Chloride | ND (0.0225) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-1
Date Sampled: 07/01/24 11:35
Percent Solids: 94
Initial Volume: 5.9g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| n-Butylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| n-Propylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| sec-Butylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Styrene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| tert-Butylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Tertiary-amyl methyl ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Tetrachloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Tetrahydrofuran | ND (0.0180) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Toluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| trans-1,2-Dichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| trans-1,3-Dichloropropene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Trichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Trichlorofluoromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Vinyl Chloride | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Xylene O | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Xylene P,M | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |
| Xylenes (Total) | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 17:56 | D4G0074 | DG40306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *111 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *93 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *98 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-1
Date Sampled: 07/01/24 11:35
Percent Solids: 94

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-06
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.33) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:20 | 2.28 100 | DG40518 |
| **Barium** | **22.8** (0.93) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:20 | 2.28 100 | DG40518 |
| Cadmium | ND (0.47) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:20 | 2.28 100 | DG40518 |
| **Chromium** | **7.60** (0.93) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:20 | 2.28 100 | DG40518 |
| **Lead** | **32.8** (4.66) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:20 | 2.28 100 | DG40518 |
| **Mercury** | **0.055** (0.032) | --- | 7471B | --- | 1 | AFV | 07/08/24 19:11 | 0.66 40 | DG40816 |
| Selenium | ND (4.66) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:20 | 2.28 100 | DG40518 |
| Silver | ND (0.47) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:20 | 2.28 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-1
Date Sampled: 07/01/24 11:35
Percent Solids: 94
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 1,2,4-Trichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 1,2-Dichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 1,3-Dichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 1,4-Dichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 2,4,5-Trichlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 2,4,6-Trichlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 2,4-Dichlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 2,4-Dimethylphenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 2,4-Dinitrophenol | ND (1.10) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 2,4-Dinitrotoluene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 2,6-Dinitrotoluene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 2-Chloronaphthalene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 2-Chlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 2-Methylnaphthalene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 2-Methylphenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 2-Nitrophenol | ND (0.548) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 3,3´-Dichlorobenzidine | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 3+4-Methylphenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 4-Bromophenyl-phenylether | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 4-Chloroaniline | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| 4-Nitrophenol | ND (1.10) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Acenaphthene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Acenaphthylene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Acetophenone | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Aniline | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Anthracene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-1
Date Sampled: 07/01/24 11:35
Percent Solids: 94
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Benzo(a)anthracene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Benzo(a)pyrene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Benzo(b)fluoranthene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Benzo(g,h,i)perylene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Benzo(k)fluoranthene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| bis(2-Chloroethoxy)methane | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| bis(2-Chloroethyl)ether | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| bis(2-chloroisopropyl)Ether | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| bis(2-Ethylhexyl)phthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Butylbenzylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Chrysene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Dibenzo(a,h)Anthracene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Dibenzofuran | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Diethylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Dimethylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Di-n-butylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Di-n-octylphthalate | ND (0.548) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Fluoranthene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Fluorene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Hexachlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Hexachlorobutadiene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Hexachloroethane | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Indeno(1,2,3-cd)Pyrene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Isophorone | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Naphthalene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Nitrobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-1
Date Sampled: 07/01/24 11:35
Percent Solids: 94
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Pentachlorophenol | ND (1.10) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Phenanthrene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Phenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Pyrene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |
| Pyridine | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:21 | D4G0113 | DG40337 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *90 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *80 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *94 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *96 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *82 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *89 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *83 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *109 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-1
Date Sampled: 07/01/24 11:35
Percent Solids: 94
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 20:10 | --- | DG40302 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 20:10 | --- | DG40302 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 20:10 | --- | DG40302 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 20:10 | --- | DG40302 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 20:10 | --- | DG40302 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 20:10 | --- | DG40302 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 20:10 | --- | DG40302 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 20:10 | --- | DG40302 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 20:10 | --- | DG40302 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *88 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-1
Date Sampled: 07/01/24 11:35
Percent Solids: 94
Initial Volume: 19.8g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/5/24 14:51

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| Chlordane (Total) | ND (0.0215) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |
| Toxaphene | ND (0.134) | --- | 8081B | --- | 1 | 07/08/24 21:08 | D4G0160 | DG40533 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *83 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-1
Date Sampled: 07/01/24 11:35
Percent Solids: 94
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/9/24 16:40

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 8:41 | D4G0206 | DG40931 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 8:41 | D4G0206 | DG40931 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 8:41 | D4G0206 | DG40931 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 07/11/24 8:41 | D4G0206 | DG40931 |
| Dalapon | ND (0.048) | --- | 8151A | --- | 1 | 07/11/24 8:41 | D4G0206 | DG40931 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 8:41 | D4G0206 | DG40931 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 8:41 | D4G0206 | DG40931 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 07/11/24 8:41 | D4G0206 | DG40931 |
| MCPA | ND (2.45) | --- | 8151A | --- | 1 | 07/11/24 8:41 | D4G0206 | DG40931 |
| MCPP | ND (2.47) | --- | 8151A | --- | 1 | 07/11/24 8:41 | D4G0206 | DG40931 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *54 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-1
Date Sampled: 07/01/24 11:35
Percent Solids: 94
Initial Volume: 20.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 15:55

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (10.5) | --- | 8100M | --- | 1 | 07/09/24 21:15 | --- | DG40339 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *76 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-1
Date Sampled: 07/01/24 11:35
Percent Solids: 94

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-06
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 146** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:48 | umhos/cm | DG40349 |
| **Corrosivity (pH)** | **6.79** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40257 |
| **Corrosivity (pH) Sample Temp** | **21.5** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40257 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | EAM | 07/02/24 20:32 | °F | DG40254 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 18:02 | ml/5 min | DG40354 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-1
Date Sampled: 07/01/24 11:50
Percent Solids: 91
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,1,1-Trichloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,1,2,2-Tetrachloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,1,2-Trichloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,1-Dichloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,1-Dichloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,1-Dichloropropene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,2,3-Trichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,2,3-Trichloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,2,4-Trichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,2,4-Trimethylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,2-Dibromoethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,2-Dichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,2-Dichloroethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,2-Dichloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,3,5-Trimethylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,3-Dichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,3-Dichloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,4-Dichlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 1,4-Dioxane | ND (0.0948) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 2,2-Dichloropropane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 2-Butanone | ND (0.0474) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 2-Chlorotoluene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 2-Hexanone | ND (0.0474) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 4-Chlorotoluene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| 4-Isopropyltoluene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-1
Date Sampled: 07/01/24 11:50
Percent Solids: 91
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0474) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Acetone | ND (0.0474) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Benzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Bromobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Bromochloromethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Bromodichloromethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Bromoform | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Bromomethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Carbon Disulfide | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Carbon Tetrachloride | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Chlorobenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Chloroethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Chloroform | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Chloromethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| cis-1,2-Dichloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| cis-1,3-Dichloropropene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Dibromochloromethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Dibromomethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Dichlorodifluoromethane | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Diethyl Ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Di-isopropyl ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Ethyl tertiary-butyl ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Ethylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Hexachlorobutadiene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Isopropylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Methyl tert-Butyl Ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Methylene Chloride | ND (0.0237) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-1
Date Sampled: 07/01/24 11:50
Percent Solids: 91
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| n-Butylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| n-Propylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| sec-Butylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Styrene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| tert-Butylbenzene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Tertiary-amyl methyl ether | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Tetrachloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Tetrahydrofuran | ND (0.0190) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Toluene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| trans-1,2-Dichloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| trans-1,3-Dichloropropene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Trichloroethene | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Trichlorofluoromethane | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Vinyl Chloride | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Xylene O | ND (0.0047) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Xylene P,M | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |
| Xylenes (Total) | ND (0.0095) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 18:22 | D4G0074 | DG40306 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *110 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *91 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *98 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-1
Date Sampled: 07/01/24 11:50
Percent Solids: 91

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-08
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.35) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:22 | 2.34 100 | DG40518 |
| **Barium** | **9.00** (0.94) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:22 | 2.34 100 | DG40518 |
| Cadmium | ND (0.47) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:22 | 2.34 100 | DG40518 |
| **Chromium** | **8.09** (0.94) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:22 | 2.34 100 | DG40518 |
| **Lead** | **12.4** (4.70) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:22 | 2.34 100 | DG40518 |
| **Mercury** | **0.054** (0.036) | --- | 7471B | --- | 1 | AFV | 07/08/24 19:13 | 0.61 40 | DG40816 |
| Selenium | ND (4.70) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:22 | 2.34 100 | DG40518 |
| Silver | ND (0.47) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:22 | 2.34 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-1
Date Sampled: 07/01/24 11:50
Percent Solids: 91
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 1,2,4-Trichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 1,2-Dichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 1,3-Dichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 1,4-Dichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 2,4,5-Trichlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 2,4,6-Trichlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 2,4-Dichlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 2,4-Dimethylphenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 2,4-Dinitrophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 2,4-Dinitrotoluene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 2,6-Dinitrotoluene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 2-Chloronaphthalene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 2-Chlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 2-Methylnaphthalene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 2-Methylphenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 2-Nitrophenol | ND (0.547) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 3,3´-Dichlorobenzidine | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 3+4-Methylphenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 4-Bromophenyl-phenylether | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 4-Chloroaniline | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| 4-Nitrophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Acenaphthene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Acenaphthylene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Acetophenone | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Aniline | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Anthracene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-1
Date Sampled: 07/01/24 11:50
Percent Solids: 91
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Benzo(a)anthracene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Benzo(a)pyrene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Benzo(b)fluoranthene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Benzo(g,h,i)perylene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Benzo(k)fluoranthene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| bis(2-Chloroethoxy)methane | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| bis(2-Chloroethyl)ether | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| bis(2-chloroisopropyl)Ether | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| bis(2-Ethylhexyl)phthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Butylbenzylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Chrysene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Dibenzo(a,h)Anthracene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Dibenzofuran | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Diethylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Dimethylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Di-n-butylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Di-n-octylphthalate | ND (0.547) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| **Fluoranthene** | **0.286** (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Fluorene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Hexachlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Hexachlorobutadiene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Hexachloroethane | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Indeno(1,2,3-cd)Pyrene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Isophorone | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Naphthalene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Nitrobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-1
Date Sampled: 07/01/24 11:50
Percent Solids: 91
Initial Volume: 20.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Pentachlorophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Phenanthrene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Phenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| **Pyrene** | **0.336** (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |
| Pyridine | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/05/24 23:51 | D4G0113 | DG40337 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *87 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *80 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *91 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *93 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *85 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *87 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *82 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *110 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-1
Date Sampled: 07/01/24 11:50
Percent Solids: 91
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 20:30 | --- | DG40302 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 20:30 | --- | DG40302 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 20:30 | --- | DG40302 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 20:30 | --- | DG40302 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 20:30 | --- | DG40302 |
| Aroclor 1254 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 20:30 | --- | DG40302 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 20:30 | --- | DG40302 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 20:30 | --- | DG40302 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 20:30 | --- | DG40302 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *87 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-1
Date Sampled: 07/01/24 11:50
Percent Solids: 91
Initial Volume: 19.2g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/5/24 14:51

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0029) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| 4,4´-DDE | ND (0.0029) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| 4,4´-DDT | ND (0.0029) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| Aldrin | ND (0.0029) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| alpha-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| alpha-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| beta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| Chlordane (Total) | ND (0.0229) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| delta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| Dieldrin | ND (0.0029) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| Endosulfan I | ND (0.0029) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| Endosulfan II | ND (0.0029) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| Endosulfan Sulfate | ND (0.0029) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| Endrin | ND (0.0029) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| Endrin Ketone | ND (0.0029) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| gamma-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| Heptachlor | ND (0.0029) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| Heptachlor Epoxide | ND (0.0029) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| Hexachlorobenzene | ND (0.0029) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| Methoxychlor | ND (0.0029) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |
| Toxaphene | ND (0.143) | --- | 8081B | --- | 1 | 07/08/24 21:35 | D4G0160 | DG40533 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *81 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *85 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-1
Date Sampled: 07/01/24 11:50
Percent Solids: 91
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/9/24 16:40

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 9:07 | D4G0206 | DG40931 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 9:07 | D4G0206 | DG40931 |
| 2,4-D | ND (0.051) | --- | 8151A | --- | 1 | 07/11/24 9:07 | D4G0206 | DG40931 |
| 2,4-DB | ND (0.052) | --- | 8151A | --- | 1 | 07/11/24 9:07 | D4G0206 | DG40931 |
| Dalapon | ND (0.050) | --- | 8151A | --- | 1 | 07/11/24 9:07 | D4G0206 | DG40931 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 9:07 | D4G0206 | DG40931 |
| Dichlorprop | ND (0.051) | --- | 8151A | --- | 1 | 07/11/24 9:07 | D4G0206 | DG40931 |
| Dinoseb | ND (0.052) | --- | 8151A | --- | 1 | 07/11/24 9:07 | D4G0206 | DG40931 |
| MCPA | ND (2.53) | --- | 8151A | --- | 1 | 07/11/24 9:07 | D4G0206 | DG40931 |
| MCPP | ND (2.56) | --- | 8151A | --- | 1 | 07/11/24 9:07 | D4G0206 | DG40931 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *44 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-1
Date Sampled: 07/01/24 11:50
Percent Solids: 91
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 15:55

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **41.4** (11.3) | --- | 8100M | --- | 1 | 07/09/24 22:04 | --- | DG40339 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | 72 % | | 40-140 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-1
Date Sampled: 07/01/24 11:50
Percent Solids: 91

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-08
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 161** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:48 | umhos/cm | DG40349 |
| **Corrosivity (pH)** | **8.51** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40257 |
| **Corrosivity (pH) Sample Temp** | **21.3** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40257 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | EAM | 07/02/24 20:32 | °F | DG40254 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 18:09 | ml/5 min | DG40354 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-3
Date Sampled: 07/01/24 12:00
Percent Solids: 94
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,1,1-Trichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,1,2,2-Tetrachloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,1,2-Trichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,1-Dichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,1-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,1-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,2,3-Trichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,2,3-Trichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,2,4-Trichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,2,4-Trimethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,2-Dibromoethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,2-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,2-Dichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,2-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,3,5-Trimethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,3-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,3-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,4-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 1,4-Dioxane | ND (0.0914) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 2,2-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 2-Butanone | ND (0.0457) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 2-Chlorotoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 2-Hexanone | ND (0.0457) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 4-Chlorotoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| 4-Isopropyltoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-3
Date Sampled: 07/01/24 12:00
Percent Solids: 94
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0457) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Acetone | ND (0.0457) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Benzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Bromobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Bromochloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Bromodichloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Bromoform | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Bromomethane | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Carbon Disulfide | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Carbon Tetrachloride | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Chlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Chloroethane | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Chloroform | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Chloromethane | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| cis-1,2-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| cis-1,3-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Dibromochloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Dibromomethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Dichlorodifluoromethane | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Diethyl Ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Di-isopropyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Ethyl tertiary-butyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Ethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Hexachlorobutadiene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Isopropylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Methyl tert-Butyl Ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Methylene Chloride | ND (0.0229) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-3
Date Sampled: 07/01/24 12:00
Percent Solids: 94
Initial Volume: 5.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| n-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| n-Propylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| sec-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Styrene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| tert-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Tertiary-amyl methyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Tetrachloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Tetrahydrofuran | ND (0.0183) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Toluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| trans-1,2-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| trans-1,3-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Trichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Trichlorofluoromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Vinyl Chloride | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Xylene O | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Xylene P,M | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |
| Xylenes (Total) | ND (0.0091) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:18 | D4G0083 | DG40319 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *109 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *92 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *107 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-3
Date Sampled: 07/01/24 12:00
Percent Solids: 94

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-10
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.27) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:24 | 2.34 100 | DG40518 |
| **Barium** | **11.7** (0.91) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:24 | 2.34 100 | DG40518 |
| Cadmium | ND (0.45) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:24 | 2.34 100 | DG40518 |
| **Chromium** | **8.95** (0.91) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:24 | 2.34 100 | DG40518 |
| **Lead** | **12.2** (4.53) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:24 | 2.34 100 | DG40518 |
| Mercury | ND (0.033) | --- | 7471B | --- | 1 | AFV | 07/08/24 19:15 | 0.63 40 | DG40816 |
| Selenium | ND (4.53) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:24 | 2.34 100 | DG40518 |
| Silver | ND (0.45) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:24 | 2.34 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-3
Date Sampled: 07/01/24 12:00
Percent Solids: 94
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 1,2,4-Trichlorobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 1,2-Dichlorobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 1,3-Dichlorobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 1,4-Dichlorobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 2,4,5-Trichlorophenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 2,4,6-Trichlorophenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 2,4-Dichlorophenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 2,4-Dimethylphenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 2,4-Dinitrophenol | ND (1.04) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 2,4-Dinitrotoluene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 2,6-Dinitrotoluene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 2-Chloronaphthalene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 2-Chlorophenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 2-Methylnaphthalene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 2-Methylphenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 2-Nitrophenol | ND (0.520) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 3,3´-Dichlorobenzidine | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 3+4-Methylphenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 4-Bromophenyl-phenylether | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 4-Chloroaniline | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| 4-Nitrophenol | ND (1.04) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Acenaphthene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Acenaphthylene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Acetophenone | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Aniline | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Anthracene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-3
Date Sampled: 07/01/24 12:00
Percent Solids: 94
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Benzo(a)anthracene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Benzo(a)pyrene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Benzo(b)fluoranthene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Benzo(g,h,i)perylene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Benzo(k)fluoranthene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| bis(2-Chloroethoxy)methane | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| bis(2-Chloroethyl)ether | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| bis(2-chloroisopropyl)Ether | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| bis(2-Ethylhexyl)phthalate | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Butylbenzylphthalate | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Chrysene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Dibenzo(a,h)Anthracene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Dibenzofuran | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Diethylphthalate | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Dimethylphthalate | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Di-n-butylphthalate | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Di-n-octylphthalate | ND (0.520) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Fluoranthene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Fluorene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Hexachlorobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Hexachlorobutadiene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Hexachloroethane | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Indeno(1,2,3-cd)Pyrene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Isophorone | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Naphthalene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Nitrobenzene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-3
Date Sampled: 07/01/24 12:00
Percent Solids: 94
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Pentachlorophenol | ND (1.04) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Phenanthrene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Phenol | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Pyrene | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |
| Pyridine | ND (0.260) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:21 | D4G0113 | DG40337 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *89 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *79 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *93 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *93 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *87 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *89 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *84 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *107 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-3
Date Sampled: 07/01/24 12:00
Percent Solids: 94
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 20:50 | --- | DG40302 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 20:50 | --- | DG40302 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 20:50 | --- | DG40302 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 20:50 | --- | DG40302 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 20:50 | --- | DG40302 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 07/05/24 20:50 | --- | DG40302 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 20:50 | --- | DG40302 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 20:50 | --- | DG40302 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 20:50 | --- | DG40302 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *82 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-3
Date Sampled: 07/01/24 12:00
Percent Solids: 94
Initial Volume: 19.3g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/5/24 14:51

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| Chlordane (Total) | ND (0.0220) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |
| Toxaphene | ND (0.137) | --- | 8081B | --- | 1 | 07/08/24 22:03 | D4G0160 | DG40533 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *100 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *95 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-3
Date Sampled: 07/01/24 12:00
Percent Solids: 94
Initial Volume: 10.2g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/9/24 16:40

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 9:34 | D4G0206 | DG40931 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 9:34 | D4G0206 | DG40931 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 9:34 | D4G0206 | DG40931 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 9:34 | D4G0206 | DG40931 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 07/11/24 9:34 | D4G0206 | DG40931 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 9:34 | D4G0206 | DG40931 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 9:34 | D4G0206 | DG40931 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 9:34 | D4G0206 | DG40931 |
| MCPA | ND (2.42) | --- | 8151A | --- | 1 | 07/11/24 9:34 | D4G0206 | DG40931 |
| MCPP | ND (2.44) | --- | 8151A | --- | 1 | 07/11/24 9:34 | D4G0206 | DG40931 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *41 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-3
Date Sampled: 07/01/24 12:00
Percent Solids: 94
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 15:55

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (10.4) | --- | 8100M | --- | 1 | 07/09/24 22:56 | --- | DG40339 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *68 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: A-3
Date Sampled: 07/01/24 12:00
Percent Solids: 94

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-10
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 126** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:48 | umhos/cm | DG40349 |
| **Corrosivity (pH)** | **8.02** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40257 |
| **Corrosivity (pH) Sample Temp** | **21.4** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40257 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | EAM | 07/02/24 20:32 | °F | DG40254 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 18:09 | ml/5 min | DG40354 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-1
Date Sampled: 07/01/24 09:50
Percent Solids: 91
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,1,1-Trichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,1,2,2-Tetrachloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,1,2-Trichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,1-Dichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,1-Dichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,1-Dichloropropene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,2,3-Trichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,2,3-Trichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,2,4-Trichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,2,4-Trimethylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,2-Dibromoethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,2-Dichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,2-Dichloroethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,2-Dichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,3,5-Trimethylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,3-Dichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,3-Dichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,4-Dichlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 1,4-Dioxane | ND (0.0897) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 2,2-Dichloropropane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 2-Butanone | ND (0.0448) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 2-Chlorotoluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 2-Hexanone | ND (0.0448) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 4-Chlorotoluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| 4-Isopropyltoluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-1
Date Sampled: 07/01/24 09:50
Percent Solids: 91
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0448) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Acetone | ND (0.0448) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Benzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Bromobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Bromochloromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Bromodichloromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Bromoform | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Bromomethane | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Carbon Disulfide | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Carbon Tetrachloride | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Chlorobenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Chloroethane | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Chloroform | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Chloromethane | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| cis-1,2-Dichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| cis-1,3-Dichloropropene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Dibromochloromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Dibromomethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Dichlorodifluoromethane | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Diethyl Ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Di-isopropyl ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Ethyl tertiary-butyl ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Ethylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Hexachlorobutadiene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Isopropylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Methyl tert-Butyl Ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Methylene Chloride | ND (0.0224) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-1
Date Sampled: 07/01/24 09:50
Percent Solids: 91
Initial Volume: 6.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| n-Butylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| n-Propylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| sec-Butylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Styrene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| tert-Butylbenzene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Tertiary-amyl methyl ether | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Tetrachloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Tetrahydrofuran | ND (0.0179) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Toluene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| trans-1,2-Dichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| trans-1,3-Dichloropropene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Trichloroethene | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Trichlorofluoromethane | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Vinyl Chloride | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Xylene O | ND (0.0045) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Xylene P,M | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |
| Xylenes (Total) | ND (0.0090) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 14:43 | D4G0083 | DG40319 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *109 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *94 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *107 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *103 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-1
Date Sampled: 07/01/24 09:50
Percent Solids: 91

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-12
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.37) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:26 | 2.31 100 | DG40518 |
| **Barium** | **11.1** (0.95) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:26 | 2.31 100 | DG40518 |
| Cadmium | ND (0.47) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:26 | 2.31 100 | DG40518 |
| **Chromium** | **6.12** (0.95) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:26 | 2.31 100 | DG40518 |
| **Lead** | **10.7** (4.74) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:26 | 2.31 100 | DG40518 |
| Mercury | ND (0.034) | --- | 7471B | --- | 1 | AFV | 07/08/24 19:22 | 0.64 40 | DG40816 |
| Selenium | ND (4.74) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:26 | 2.31 100 | DG40518 |
| Silver | ND (0.47) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:26 | 2.31 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-1
Date Sampled: 07/01/24 09:50
Percent Solids: 91
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 1,2,4-Trichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 1,2-Dichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 1,3-Dichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 1,4-Dichlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 2,4,5-Trichlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 2,4,6-Trichlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 2,4-Dichlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 2,4-Dimethylphenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 2,4-Dinitrophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 2,4-Dinitrotoluene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 2,6-Dinitrotoluene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 2-Chloronaphthalene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 2-Chlorophenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 2-Methylnaphthalene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 2-Methylphenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 2-Nitrophenol | ND (0.547) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 3,3´-Dichlorobenzidine | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 3+4-Methylphenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 4-Bromophenyl-phenylether | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 4-Chloroaniline | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| 4-Nitrophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Acenaphthene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Acenaphthylene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Acetophenone | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Aniline | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Anthracene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-1
Date Sampled: 07/01/24 09:50
Percent Solids: 91
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Benzo(a)anthracene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Benzo(a)pyrene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Benzo(b)fluoranthene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Benzo(g,h,i)perylene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Benzo(k)fluoranthene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| bis(2-Chloroethoxy)methane | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| bis(2-Chloroethyl)ether | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| bis(2-chloroisopropyl)Ether | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| bis(2-Ethylhexyl)phthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Butylbenzylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Chrysene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Dibenzo(a,h)Anthracene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Dibenzofuran | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Diethylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Dimethylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Di-n-butylphthalate | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Di-n-octylphthalate | ND (0.547) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Fluoranthene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Fluorene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Hexachlorobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Hexachlorobutadiene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Hexachloroethane | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Indeno(1,2,3-cd)Pyrene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Isophorone | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Naphthalene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Nitrobenzene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-1
Date Sampled: 07/01/24 09:50
Percent Solids: 91
Initial Volume: 20g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Pentachlorophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Phenanthrene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Phenol | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Pyrene | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |
| Pyridine | ND (0.274) | --- | 8270E | --- | 1 | TJ | 07/06/24 0:52 | D4G0113 | DG40337 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *90 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *84 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *95 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *96 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *84 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *89 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *86 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *115 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-1
Date Sampled: 07/01/24 09:50
Percent Solids: 91
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:10 | --- | DG40302 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:10 | --- | DG40302 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:10 | --- | DG40302 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:10 | --- | DG40302 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:10 | --- | DG40302 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:10 | --- | DG40302 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:10 | --- | DG40302 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:10 | --- | DG40302 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:10 | --- | DG40302 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-1
Date Sampled: 07/01/24 09:50
Percent Solids: 91
Initial Volume: 19.6g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/5/24 14:51

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| 4,4´-DDE | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| 4,4´-DDT | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| Aldrin | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| alpha-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| alpha-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| beta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| Chlordane (Total) | ND (0.0223) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| delta-BHC | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| Dieldrin | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| Endosulfan I | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| Endosulfan II | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| Endosulfan Sulfate | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| Endrin | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| Endrin Ketone | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| gamma-BHC (Lindane) | ND (0.0017) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| gamma-Chlordane | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| Heptachlor | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| Heptachlor Epoxide | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| Hexachlorobenzene | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| Methoxychlor | ND (0.0028) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |
| Toxaphene | ND (0.140) | --- | 8081B | --- | 1 | 07/08/24 22:31 | D4G0160 | DG40533 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *74 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *70 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-1
Date Sampled: 07/01/24 09:50
Percent Solids: 91
Initial Volume: 10.4g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/9/24 16:40

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 10:01 | D4G0206 | DG40931 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 10:01 | D4G0206 | DG40931 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 10:01 | D4G0206 | DG40931 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 07/11/24 10:01 | D4G0206 | DG40931 |
| Dalapon | ND (0.048) | --- | 8151A | --- | 1 | 07/11/24 10:01 | D4G0206 | DG40931 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 10:01 | D4G0206 | DG40931 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 10:01 | D4G0206 | DG40931 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 07/11/24 10:01 | D4G0206 | DG40931 |
| MCPA | ND (2.45) | --- | 8151A | --- | 1 | 07/11/24 10:01 | D4G0206 | DG40931 |
| MCPP | ND (2.47) | --- | 8151A | --- | 1 | 07/11/24 10:01 | D4G0206 | DG40931 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *46 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-1
Date Sampled: 07/01/24 09:50
Percent Solids: 91
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 15:55

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (11.1) | --- | 8100M | --- | 1 | 07/09/24 23:45 | --- | DG40339 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *68 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-1
Date Sampled: 07/01/24 09:50
Percent Solids: 91

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-12
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 206** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:48 | umhos/cm | DG40349 |
| **Corrosivity (pH)** | **7.36** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40257 |
| **Corrosivity (pH) Sample Temp** | **21.3** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40257 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | EAM | 07/02/24 20:32 | °F | DG40254 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 18:09 | ml/5 min | DG40354 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-3
Date Sampled: 07/01/24 10:00
Percent Solids: 93
Initial Volume: 5.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,1,1-Trichloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,1,2,2-Tetrachloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,1,2-Trichloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,1-Dichloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,1-Dichloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,1-Dichloropropene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,2,3-Trichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,2,3-Trichloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,2,4-Trichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,2,4-Trimethylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,2-Dibromoethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,2-Dichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,2-Dichloroethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,2-Dichloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,3,5-Trimethylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,3-Dichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,3-Dichloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,4-Dichlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 1,4-Dioxane | ND (0.102) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 2,2-Dichloropropane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 2-Butanone | ND (0.0508) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 2-Chlorotoluene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 2-Hexanone | ND (0.0508) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 4-Chlorotoluene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| 4-Isopropyltoluene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-3
Date Sampled: 07/01/24 10:00
Percent Solids: 93
Initial Volume: 5.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0508) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Acetone | ND (0.0508) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Benzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Bromobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Bromochloromethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Bromodichloromethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Bromoform | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Bromomethane | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Carbon Disulfide | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Carbon Tetrachloride | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Chlorobenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Chloroethane | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Chloroform | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Chloromethane | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| cis-1,2-Dichloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| cis-1,3-Dichloropropene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Dibromochloromethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Dibromomethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Dichlorodifluoromethane | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Diethyl Ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Di-isopropyl ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Ethyl tertiary-butyl ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Ethylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Hexachlorobutadiene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Isopropylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Methyl tert-Butyl Ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Methylene Chloride | ND (0.0254) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-3
Date Sampled: 07/01/24 10:00
Percent Solids: 93
Initial Volume: 5.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| n-Butylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| n-Propylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| sec-Butylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Styrene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| tert-Butylbenzene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Tertiary-amyl methyl ether | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Tetrachloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Tetrahydrofuran | ND (0.0203) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Toluene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| trans-1,2-Dichloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| trans-1,3-Dichloropropene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Trichloroethene | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Trichlorofluoromethane | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Vinyl Chloride | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Xylene O | ND (0.0051) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Xylene P,M | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |
| Xylenes (Total) | ND (0.0102) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:08 | D4G0083 | DG40319 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *108 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *97 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *106 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-3
Date Sampled: 07/01/24 10:00
Percent Solids: 93

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-14
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.40) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:35 | 2.24 100 | DG40518 |
| **Barium** | **8.78** (0.96) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:35 | 2.24 100 | DG40518 |
| Cadmium | ND (0.48) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:35 | 2.24 100 | DG40518 |
| **Chromium** | **6.58** (0.96) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:35 | 2.24 100 | DG40518 |
| **Lead** | **7.44** (4.80) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:35 | 2.24 100 | DG40518 |
| Mercury | ND (0.033) | --- | 7471B | --- | 1 | AFV | 07/08/24 19:24 | 0.64 40 | DG40816 |
| Selenium | ND (4.80) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:35 | 2.24 100 | DG40518 |
| Silver | ND (0.48) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:35 | 2.24 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-3
Date Sampled: 07/01/24 10:00
Percent Solids: 93
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 1,2,4-Trichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 1,2-Dichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 1,3-Dichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 1,4-Dichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 2,4,5-Trichlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 2,4,6-Trichlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 2,4-Dichlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 2,4-Dimethylphenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 2,4-Dinitrophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 2,4-Dinitrotoluene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 2,6-Dinitrotoluene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 2-Chloronaphthalene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 2-Chlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 2-Methylnaphthalene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 2-Methylphenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 2-Nitrophenol | ND (0.546) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 3,3´-Dichlorobenzidine | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 3+4-Methylphenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 4-Bromophenyl-phenylether | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 4-Chloroaniline | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| 4-Nitrophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Acenaphthene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Acenaphthylene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Acetophenone | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Aniline | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Anthracene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-3
Date Sampled: 07/01/24 10:00
Percent Solids: 93
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Benzo(a)anthracene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Benzo(a)pyrene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Benzo(b)fluoranthene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Benzo(g,h,i)perylene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Benzo(k)fluoranthene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| bis(2-Chloroethoxy)methane | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| bis(2-Chloroethyl)ether | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| bis(2-chloroisopropyl)Ether | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| bis(2-Ethylhexyl)phthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Butylbenzylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Chrysene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Dibenzo(a,h)Anthracene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Dibenzofuran | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Diethylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Dimethylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Di-n-butylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Di-n-octylphthalate | ND (0.546) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Fluoranthene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Fluorene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Hexachlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Hexachlorobutadiene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Hexachloroethane | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Indeno(1,2,3-cd)Pyrene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Isophorone | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Naphthalene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Nitrobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-3
Date Sampled: 07/01/24 10:00
Percent Solids: 93
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Pentachlorophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Phenanthrene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Phenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Pyrene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |
| Pyridine | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:22 | D4G0113 | DG40337 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *92 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *80 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *94 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *96 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *84 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *89 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *82 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *110 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-3
Date Sampled: 07/01/24 10:00
Percent Solids: 93
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:29 | --- | DG40302 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:29 | --- | DG40302 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:29 | --- | DG40302 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:29 | --- | DG40302 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:29 | --- | DG40302 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:29 | --- | DG40302 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:29 | --- | DG40302 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:29 | --- | DG40302 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:29 | --- | DG40302 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *86 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-3
Date Sampled: 07/01/24 10:00
Percent Solids: 93
Initial Volume: 19.6g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/5/24 14:51

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| Chlordane (Total) | ND (0.0220) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |
| Toxaphene | ND (0.137) | --- | 8081B | --- | 1 | 07/08/24 22:58 | D4G0160 | DG40533 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-3
Date Sampled: 07/01/24 10:00
Percent Solids: 93
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/9/24 16:40

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 10:27 | D4G0206 | DG40931 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 10:27 | D4G0206 | DG40931 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 10:27 | D4G0206 | DG40931 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 07/11/24 10:27 | D4G0206 | DG40931 |
| Dalapon | ND (0.048) | --- | 8151A | --- | 1 | 07/11/24 10:27 | D4G0206 | DG40931 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 10:27 | D4G0206 | DG40931 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 10:27 | D4G0206 | DG40931 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 07/11/24 10:27 | D4G0206 | DG40931 |
| MCPA | ND (2.43) | --- | 8151A | --- | 1 | 07/11/24 10:27 | D4G0206 | DG40931 |
| MCPP | ND (2.46) | --- | 8151A | --- | 1 | 07/11/24 10:27 | D4G0206 | DG40931 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *49 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-3
Date Sampled: 07/01/24 10:00
Percent Solids: 93
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 15:55

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (10.7) | --- | 8100M | --- | 1 | 07/10/24 0:38 | --- | DG40339 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *79 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-3
Date Sampled: 07/01/24 10:00
Percent Solids: 93

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-14
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 68** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:48 | umhos/cm | DG40349 |
| **Corrosivity (pH)** | **7.56** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40257 |
| **Corrosivity (pH) Sample Temp** | **21.4** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40257 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | EAM | 07/02/24 20:32 | °F | DG40254 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 18:16 | ml/5 min | DG40354 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-5
Date Sampled: 07/01/24 10:20
Percent Solids: 94
Initial Volume: 5.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,1,1-Trichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,1,2,2-Tetrachloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,1,2-Trichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,1-Dichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,1-Dichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,1-Dichloropropene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,2,3-Trichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,2,3-Trichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,2,4-Trichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,2,4-Trimethylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,2-Dibromoethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,2-Dichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,2-Dichloroethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,2-Dichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,3,5-Trimethylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,3-Dichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,3-Dichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,4-Dichlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 1,4-Dioxane | ND (0.0972) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 2,2-Dichloropropane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 2-Butanone | ND (0.0486) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 2-Chlorotoluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 2-Hexanone | ND (0.0486) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 4-Chlorotoluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| 4-Isopropyltoluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-5
Date Sampled: 07/01/24 10:20
Percent Solids: 94
Initial Volume: 5.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0486) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Acetone | ND (0.0486) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Benzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Bromobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Bromochloromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Bromodichloromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Bromoform | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Bromomethane | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Carbon Disulfide | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Carbon Tetrachloride | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Chlorobenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Chloroethane | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Chloroform | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Chloromethane | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| cis-1,2-Dichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| cis-1,3-Dichloropropene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Dibromochloromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Dibromomethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Dichlorodifluoromethane | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Diethyl Ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Di-isopropyl ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Ethyl tertiary-butyl ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Ethylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Hexachlorobutadiene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Isopropylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Methyl tert-Butyl Ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Methylene Chloride | ND (0.0243) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-5
Date Sampled: 07/01/24 10:20
Percent Solids: 94
Initial Volume: 5.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| n-Butylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| n-Propylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| sec-Butylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Styrene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| tert-Butylbenzene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Tertiary-amyl methyl ether | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Tetrachloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Tetrahydrofuran | ND (0.0194) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Toluene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| trans-1,2-Dichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| trans-1,3-Dichloropropene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Trichloroethene | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Trichlorofluoromethane | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Vinyl Chloride | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Xylene O | ND (0.0049) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Xylene P,M | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |
| Xylenes (Total) | ND (0.0097) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:34 | D4G0083 | DG40319 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *110 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *93 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *107 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-5
Date Sampled: 07/01/24 10:20
Percent Solids: 94

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-16
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.67) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:37 | 2 | 100 | DG40518 |
| **Barium** | **8.01** (1.07) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:37 | 2 | 100 | DG40518 |
| Cadmium | ND (0.53) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:37 | 2 | 100 | DG40518 |
| **Chromium** | **5.72** (1.07) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:37 | 2 | 100 | DG40518 |
| **Lead** | **6.12** (5.34) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:37 | 2 | 100 | DG40518 |
| Mercury | ND (0.035) | --- | 7471B | --- | 1 | AFV | 07/08/24 19:26 | 0.6 | 40 | DG40816 |
| Selenium | ND (5.34) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:37 | 2 | 100 | DG40518 |
| Silver | ND (0.53) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:37 | 2 | 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-5
Date Sampled: 07/01/24 10:20
Percent Solids: 94
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 1,2,4-Trichlorobenzene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 1,2-Dichlorobenzene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 1,3-Dichlorobenzene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 1,4-Dichlorobenzene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 2,4,5-Trichlorophenol | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 2,4,6-Trichlorophenol | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 2,4-Dichlorophenol | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 2,4-Dimethylphenol | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 2,4-Dinitrophenol | ND (1.07) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 2,4-Dinitrotoluene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 2,6-Dinitrotoluene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 2-Chloronaphthalene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 2-Chlorophenol | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 2-Methylnaphthalene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 2-Methylphenol | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 2-Nitrophenol | ND (0.537) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 3,3´-Dichlorobenzidine | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 3+4-Methylphenol | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 4-Bromophenyl-phenylether | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 4-Chloroaniline | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| 4-Nitrophenol | ND (1.07) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Acenaphthene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Acenaphthylene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Acetophenone | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Aniline | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Anthracene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-5
Date Sampled: 07/01/24 10:20
Percent Solids: 94
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Benzo(a)anthracene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Benzo(a)pyrene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Benzo(b)fluoranthene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Benzo(g,h,i)perylene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Benzo(k)fluoranthene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| bis(2-Chloroethoxy)methane | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| bis(2-Chloroethyl)ether | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| bis(2-chloroisopropyl)Ether | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| bis(2-Ethylhexyl)phthalate | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Butylbenzylphthalate | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Chrysene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Dibenzo(a,h)Anthracene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Dibenzofuran | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Diethylphthalate | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Dimethylphthalate | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Di-n-butylphthalate | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Di-n-octylphthalate | ND (0.537) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Fluoranthene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Fluorene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Hexachlorobenzene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Hexachlorobutadiene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Hexachloroethane | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Indeno(1,2,3-cd)Pyrene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Isophorone | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Naphthalene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Nitrobenzene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-5
Date Sampled: 07/01/24 10:20
Percent Solids: 94
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Pentachlorophenol | ND (1.07) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Phenanthrene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Phenol | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Pyrene | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |
| Pyridine | ND (0.269) | --- | 8270E | --- | 1 | TJ | 07/06/24 1:52 | D4G0113 | DG40337 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *84 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *75 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *88 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *91 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *76 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *83 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *77 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *108 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-5
Date Sampled: 07/01/24 10:20
Percent Solids: 94
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:49 | --- | DG40302 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:49 | --- | DG40302 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:49 | --- | DG40302 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:49 | --- | DG40302 |
| Aroclor 1248 [2C] | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:49 | --- | DG40302 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:49 | --- | DG40302 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:49 | --- | DG40302 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:49 | --- | DG40302 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 21:49 | --- | DG40302 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *88 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-5
Date Sampled: 07/01/24 10:20
Percent Solids: 94
Initial Volume: 19.8g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/5/24 14:51

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0027) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| 4,4´-DDE | ND (0.0027) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| 4,4´-DDT | ND (0.0027) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| Aldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| alpha-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| alpha-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| beta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| Chlordane (Total) | ND (0.0216) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| delta-BHC | ND (0.0027) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| Dieldrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| Endosulfan I | ND (0.0027) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| Endosulfan II | ND (0.0027) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| Endosulfan Sulfate | ND (0.0027) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| Endrin | ND (0.0027) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| Endrin Ketone | ND (0.0027) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| gamma-BHC (Lindane) | ND (0.0016) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| gamma-Chlordane | ND (0.0027) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| Heptachlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| Heptachlor Epoxide | ND (0.0027) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| Hexachlorobenzene | ND (0.0027) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| Methoxychlor | ND (0.0027) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |
| Toxaphene | ND (0.135) | --- | 8081B | --- | 1 | 07/09/24 2:12 | D4G0160 | DG40533 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *84 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *76 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-5
Date Sampled: 07/01/24 10:20
Percent Solids: 94
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/9/24 16:40

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 10:54 | D4G0206 | DG40931 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 10:54 | D4G0206 | DG40931 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 10:54 | D4G0206 | DG40931 |
| 2,4-DB | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 10:54 | D4G0206 | DG40931 |
| Dalapon | ND (0.047) | --- | 8151A | --- | 1 | 07/11/24 10:54 | D4G0206 | DG40931 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 10:54 | D4G0206 | DG40931 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 10:54 | D4G0206 | DG40931 |
| Dinoseb | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 10:54 | D4G0206 | DG40931 |
| MCPA | ND (2.41) | --- | 8151A | --- | 1 | 07/11/24 10:54 | D4G0206 | DG40931 |
| MCPP | ND (2.44) | --- | 8151A | --- | 1 | 07/11/24 10:54 | D4G0206 | DG40931 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *47 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-5
Date Sampled: 07/01/24 10:20
Percent Solids: 94
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 15:55

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (11.0) | --- | 8100M | --- | 1 | 07/10/24 1:27 | --- | DG40339 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *77 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-5
Date Sampled: 07/01/24 10:20
Percent Solids: 94

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-16
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 224** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:48 | umhos/cm | DG40349 |
| **Corrosivity (pH)** | **6.79** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40257 |
| **Corrosivity (pH) Sample Temp** | **21.4** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40257 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | EAM | 07/02/24 20:32 | °F | DG40254 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 18:16 | ml/5 min | DG40354 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-7
Date Sampled: 07/01/24 10:35
Percent Solids: 95
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,1,1-Trichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,1,2,2-Tetrachloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,1,2-Trichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,1-Dichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,1-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,1-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,2,3-Trichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,2,3-Trichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,2,4-Trichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,2,4-Trimethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,2-Dibromoethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,2-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,2-Dichloroethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,2-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,3,5-Trimethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,3-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,3-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,4-Dichlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 1,4-Dioxane | ND (0.0928) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 2,2-Dichloropropane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 2-Butanone | ND (0.0464) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 2-Chlorotoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 2-Hexanone | ND (0.0464) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 4-Chlorotoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| 4-Isopropyltoluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-7
Date Sampled: 07/01/24 10:35
Percent Solids: 95
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0464) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Acetone | ND (0.0464) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Benzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Bromobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Bromochloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Bromodichloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Bromoform | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Bromomethane | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Carbon Disulfide | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Carbon Tetrachloride | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Chlorobenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Chloroethane | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Chloroform | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Chloromethane | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| cis-1,2-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| cis-1,3-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Dibromochloromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Dibromomethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Dichlorodifluoromethane | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Diethyl Ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Di-isopropyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Ethyl tertiary-butyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Ethylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Hexachlorobutadiene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Isopropylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Methyl tert-Butyl Ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Methylene Chloride | ND (0.0232) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-7
Date Sampled: 07/01/24 10:35
Percent Solids: 95
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| n-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| n-Propylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| sec-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Styrene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| tert-Butylbenzene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Tertiary-amyl methyl ether | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Tetrachloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Tetrahydrofuran | ND (0.0186) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Toluene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| trans-1,2-Dichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| trans-1,3-Dichloropropene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Trichloroethene | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Trichlorofluoromethane | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Vinyl Chloride | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Xylene O | ND (0.0046) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Xylene P,M | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |
| Xylenes (Total) | ND (0.0093) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 15:59 | D4G0083 | DG40319 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *109 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *98 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *107 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *101 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-7
Date Sampled: 07/01/24 10:35
Percent Solids: 95

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-18
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.26) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:39 | 2.34 100 | DG40518 |
| **Barium** | **10.6** (0.90) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:39 | 2.34 100 | DG40518 |
| Cadmium | ND (0.45) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:39 | 2.34 100 | DG40518 |
| **Chromium** | **7.58** (0.90) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:39 | 2.34 100 | DG40518 |
| **Lead** | **6.95** (4.52) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:39 | 2.34 100 | DG40518 |
| Mercury | ND (0.032) | --- | 7471B | --- | 1 | AFV | 07/08/24 19:28 | 0.65 40 | DG40816 |
| Selenium | ND (4.52) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:39 | 2.34 100 | DG40518 |
| Silver | ND (0.45) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:39 | 2.34 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-7
Date Sampled: 07/01/24 10:35
Percent Solids: 95
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 1,2,4-Trichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 1,2-Dichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 1,3-Dichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 1,4-Dichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 2,4,5-Trichlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 2,4,6-Trichlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 2,4-Dichlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 2,4-Dimethylphenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 2,4-Dinitrophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 2,4-Dinitrotoluene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 2,6-Dinitrotoluene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 2-Chloronaphthalene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 2-Chlorophenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 2-Methylnaphthalene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 2-Methylphenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 2-Nitrophenol | ND (0.545) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 3,3´-Dichlorobenzidine | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 3+4-Methylphenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 4-Bromophenyl-phenylether | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 4-Chloroaniline | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| 4-Nitrophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Acenaphthene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Acenaphthylene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Acetophenone | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Aniline | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Anthracene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-7
Date Sampled: 07/01/24 10:35
Percent Solids: 95
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Benzo(a)anthracene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Benzo(a)pyrene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Benzo(b)fluoranthene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Benzo(g,h,i)perylene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Benzo(k)fluoranthene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| bis(2-Chloroethoxy)methane | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| bis(2-Chloroethyl)ether | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| bis(2-chloroisopropyl)Ether | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| bis(2-Ethylhexyl)phthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Butylbenzylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Chrysene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Dibenzo(a,h)Anthracene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Dibenzofuran | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Diethylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Dimethylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Di-n-butylphthalate | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Di-n-octylphthalate | ND (0.545) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Fluoranthene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Fluorene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Hexachlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Hexachlorobutadiene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Hexachloroethane | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Indeno(1,2,3-cd)Pyrene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Isophorone | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Naphthalene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Nitrobenzene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-7
Date Sampled: 07/01/24 10:35
Percent Solids: 95
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Pentachlorophenol | ND (1.09) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Phenanthrene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Phenol | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Pyrene | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |
| Pyridine | ND (0.273) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:23 | D4G0113 | DG40337 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *91 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *82 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *96 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *95 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *82 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *87 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *84 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *112 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-7
Date Sampled: 07/01/24 10:35
Percent Solids: 95
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 22:09 | --- | DG40302 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 22:09 | --- | DG40302 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 22:09 | --- | DG40302 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 22:09 | --- | DG40302 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 22:09 | --- | DG40302 |
| **Aroclor 1254 [2C]** | **0.07** (0.05) | --- | 8082A | --- | 1 | 07/05/24 22:09 | --- | DG40302 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 22:09 | --- | DG40302 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 22:09 | --- | DG40302 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/05/24 22:09 | --- | DG40302 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *88 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *84 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-7
Date Sampled: 07/01/24 10:35
Percent Solids: 95
Initial Volume: 20.5g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/5/24 14:51

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0026) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| 4,4´-DDE | ND (0.0026) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| 4,4´-DDT | ND (0.0026) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| Aldrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| alpha-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| alpha-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| beta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| Chlordane (Total) | ND (0.0206) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| delta-BHC | ND (0.0026) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| Dieldrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| Endosulfan I | ND (0.0026) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| Endosulfan II | ND (0.0026) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| Endosulfan Sulfate | ND (0.0026) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| Endrin | ND (0.0026) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| Endrin Ketone | ND (0.0026) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| gamma-BHC (Lindane) | ND (0.0015) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| gamma-Chlordane | ND (0.0026) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| Heptachlor | ND (0.0026) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| Heptachlor Epoxide | ND (0.0026) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| Hexachlorobenzene | ND (0.0026) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| Methoxychlor | ND (0.0026) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |
| Toxaphene | ND (0.129) | --- | 8081B | --- | 1 | 07/09/24 2:40 | D4G0160 | DG40533 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *90 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *85 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-7
Date Sampled: 07/01/24 10:35
Percent Solids: 95
Initial Volume: 10.1g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/9/24 16:40

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 11:21 | D4G0206 | DG40931 |
| 2,4,5-TP (Silvex) | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 11:21 | D4G0206 | DG40931 |
| 2,4-D | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 11:21 | D4G0206 | DG40931 |
| 2,4-DB | ND (0.050) | --- | 8151A | --- | 1 | 07/11/24 11:21 | D4G0206 | DG40931 |
| Dalapon | ND (0.048) | --- | 8151A | --- | 1 | 07/11/24 11:21 | D4G0206 | DG40931 |
| Dicamba | ND (0.010) | --- | 8151A | --- | 1 | 07/11/24 11:21 | D4G0206 | DG40931 |
| Dichlorprop | ND (0.049) | --- | 8151A | --- | 1 | 07/11/24 11:21 | D4G0206 | DG40931 |
| Dinoseb | ND (0.050) | --- | 8151A | --- | 1 | 07/11/24 11:21 | D4G0206 | DG40931 |
| MCPA | ND (2.43) | --- | 8151A | --- | 1 | 07/11/24 11:21 | D4G0206 | DG40931 |
| MCPP | ND (2.46) | --- | 8151A | --- | 1 | 07/11/24 11:21 | D4G0206 | DG40931 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *52 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-7
Date Sampled: 07/01/24 10:35
Percent Solids: 95
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 15:55

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Total Petroleum Hydrocarbons (C9-C36) | ND (10.3) | --- | 8100M | --- | 1 | 07/10/24 2:18 | --- | DG40339 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *72 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: E-7
Date Sampled: 07/01/24 10:35
Percent Solids: 95

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-18
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 1980** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:48 | umhos/cm | DG40349 |
| **Corrosivity (pH)** | **8.06** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40257 |
| **Corrosivity (pH) Sample Temp** | **21.5** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40257 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | EAM | 07/02/24 20:32 | °F | DG40254 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 18:16 | ml/5 min | DG40354 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-7
Date Sampled: 07/01/24 10:50
Percent Solids: 85
Initial Volume: 5.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,1,1-Trichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,1,2,2-Tetrachloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,1,2-Trichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,1-Dichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,1-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,1-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,2,3-Trichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,2,3-Trichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,2,4-Trichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,2,4-Trimethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,2-Dibromo-3-Chloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,2-Dibromoethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,2-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,2-Dichloroethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,2-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,3,5-Trimethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,3-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,3-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,4-Dichlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 1,4-Dioxane | ND (0.107) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 2,2-Dichloropropane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 2-Butanone | ND (0.0536) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 2-Chlorotoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 2-Hexanone | ND (0.0536) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 4-Chlorotoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| 4-Isopropyltoluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-7
Date Sampled: 07/01/24 10:50
Percent Solids: 85
Initial Volume: 5.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 4-Methyl-2-Pentanone | ND (0.0536) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Acetone | ND (0.0536) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Benzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Bromobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Bromochloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Bromodichloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Bromoform | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Bromomethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Carbon Disulfide | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Carbon Tetrachloride | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Chlorobenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Chloroethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Chloroform | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Chloromethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| cis-1,2-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| cis-1,3-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Dibromochloromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Dibromomethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Dichlorodifluoromethane | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Diethyl Ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Di-isopropyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Ethyl tertiary-butyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Ethylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Hexachlorobutadiene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Isopropylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Methyl tert-Butyl Ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Methylene Chloride | ND (0.0268) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-7
Date Sampled: 07/01/24 10:50
Percent Solids: 85
Initial Volume: 5.5g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 7/3/24 8:00

## Volatile Organics Low Level

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| n-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| n-Propylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| sec-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Styrene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| tert-Butylbenzene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Tertiary-amyl methyl ether | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Tetrachloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Tetrahydrofuran | ND (0.0214) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Toluene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| trans-1,2-Dichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| trans-1,3-Dichloropropene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Trichloroethene | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Trichlorofluoromethane | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Vinyl Chloride | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Xylene O | ND (0.0054) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Xylene P,M | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |
| Xylenes (Total) | ND (0.0107) | --- | 8260D Low | --- | 1 | MEK | 07/03/24 16:24 | D4G0083 | DG40319 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *110 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *95 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *107 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *99 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-7
Date Sampled: 07/01/24 10:50
Percent Solids: 85

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-20
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | IV / FV | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **EL** ND (2.52) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:41 | 2.34 100 | DG40518 |
| **Barium** | **10.0** (1.01) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:41 | 2.34 100 | DG40518 |
| Cadmium | ND (0.50) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:41 | 2.34 100 | DG40518 |
| **Chromium** | **8.76** (1.01) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:41 | 2.34 100 | DG40518 |
| **Lead** | **11.2** (5.04) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:41 | 2.34 100 | DG40518 |
| Mercury | ND (0.034) | --- | 7471B | --- | 1 | AFV | 07/08/24 19:31 | 0.69 40 | DG40816 |
| Selenium | ND (5.04) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:41 | 2.34 100 | DG40518 |
| Silver | ND (0.50) | --- | 6010D | --- | 1 | CEV | 07/08/24 16:41 | 2.34 100 | DG40518 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-7
Date Sampled: 07/01/24 10:50
Percent Solids: 85
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.029) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 1,2,4-Trichlorobenzene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 1,2-Dichlorobenzene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 1,3-Dichlorobenzene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 1,4-Dichlorobenzene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 2,4,5-Trichlorophenol | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 2,4,6-Trichlorophenol | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 2,4-Dichlorophenol | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 2,4-Dimethylphenol | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 2,4-Dinitrophenol | ND (1.16) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 2,4-Dinitrotoluene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 2,6-Dinitrotoluene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 2-Chloronaphthalene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 2-Chlorophenol | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 2-Methylnaphthalene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 2-Methylphenol | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 2-Nitrophenol | ND (0.578) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 3,3´-Dichlorobenzidine | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 3+4-Methylphenol | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 4-Bromophenyl-phenylether | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 4-Chloroaniline | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| 4-Nitrophenol | ND (1.16) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Acenaphthene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Acenaphthylene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Acetophenone | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Aniline | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Anthracene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-7
Date Sampled: 07/01/24 10:50
Percent Solids: 85
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Benzo(a)anthracene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Benzo(a)pyrene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Benzo(b)fluoranthene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Benzo(g,h,i)perylene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Benzo(k)fluoranthene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| bis(2-Chloroethoxy)methane | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| bis(2-Chloroethyl)ether | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| bis(2-chloroisopropyl)Ether | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| bis(2-Ethylhexyl)phthalate | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Butylbenzylphthalate | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Chrysene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Dibenzo(a,h)Anthracene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Dibenzofuran | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Diethylphthalate | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Dimethylphthalate | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Di-n-butylphthalate | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Di-n-octylphthalate | ND (0.578) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Fluoranthene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Fluorene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Hexachlorobenzene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Hexachlorobutadiene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Hexachloroethane | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Indeno(1,2,3-cd)Pyrene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Isophorone | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Naphthalene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Nitrobenzene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-7
Date Sampled: 07/01/24 10:50
Percent Solids: 85
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 7/3/24 15:30

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Pentachlorophenol | ND (1.16) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Phenanthrene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Phenol | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Pyrene | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |
| Pyridine | ND (0.289) | --- | 8270E | --- | 1 | TJ | 07/06/24 2:53 | D4G0113 | DG40337 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *84 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *78 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *91 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *89 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *78 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *85 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *81 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *108 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-7
Date Sampled: 07/01/24 10:50
Percent Solids: 85
Initial Volume: 20.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/3/24 9:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 22:29 | --- | DG40302 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 22:29 | --- | DG40302 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 22:29 | --- | DG40302 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 22:29 | --- | DG40302 |
| **Aroclor 1248** | **0.08** (0.06) | --- | 8082A | --- | 1 | 07/05/24 22:29 | --- | DG40302 |
| **Aroclor 1254 [2C]** | **0.3** (0.06) | --- | 8082A | --- | 1 | 07/05/24 22:29 | --- | DG40302 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 22:29 | --- | DG40302 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 22:29 | --- | DG40302 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 07/05/24 22:29 | --- | DG40302 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *87 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-7
Date Sampled: 07/01/24 10:50
Percent Solids: 85
Initial Volume: 20.1g
Final Volume: 5ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/5/24 14:51

## 8081B Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.0029) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| 4,4´-DDE | ND (0.0029) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| 4,4´-DDT | ND (0.0029) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| Aldrin | ND (0.0029) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| alpha-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| alpha-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| beta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| Chlordane (Total) | ND (0.0235) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| delta-BHC | ND (0.0029) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| Dieldrin | ND (0.0029) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| Endosulfan I | ND (0.0029) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| Endosulfan II | ND (0.0029) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| Endosulfan Sulfate | ND (0.0029) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| Endrin | ND (0.0029) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| Endrin Ketone | ND (0.0029) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| gamma-BHC (Lindane) | ND (0.0018) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| gamma-Chlordane | ND (0.0029) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| Heptachlor | ND (0.0029) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| Heptachlor Epoxide | ND (0.0029) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| Hexachlorobenzene | ND (0.0029) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| Methoxychlor | ND (0.0029) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |
| Toxaphene | ND (0.147) | --- | 8081B | --- | 1 | 07/09/24 3:08 | D4G0160 | DG40533 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *87 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *81 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-7
Date Sampled: 07/01/24 10:50
Percent Solids: 85
Initial Volume: 10.3g
Final Volume: 4ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 7/9/24 16:40

## 8151A Chlorinated Herbicides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 2,4,5-T | ND (0.011) | --- | 8151A | --- | 1 | 07/11/24 11:47 | D4G0206 | DG40931 |
| 2,4,5-TP (Silvex) | ND (0.011) | --- | 8151A | --- | 1 | 07/11/24 11:47 | D4G0206 | DG40931 |
| 2,4-D | ND (0.054) | --- | 8151A | --- | 1 | 07/11/24 11:47 | D4G0206 | DG40931 |
| 2,4-DB | ND (0.054) | --- | 8151A | --- | 1 | 07/11/24 11:47 | D4G0206 | DG40931 |
| Dalapon | ND (0.052) | --- | 8151A | --- | 1 | 07/11/24 11:47 | D4G0206 | DG40931 |
| Dicamba | ND (0.011) | --- | 8151A | --- | 1 | 07/11/24 11:47 | D4G0206 | DG40931 |
| Dichlorprop | ND (0.054) | --- | 8151A | --- | 1 | 07/11/24 11:47 | D4G0206 | DG40931 |
| Dinoseb | ND (0.054) | --- | 8151A | --- | 1 | 07/11/24 11:47 | D4G0206 | DG40931 |
| MCPA | ND (2.66) | --- | 8151A | --- | 1 | 07/11/24 11:47 | D4G0206 | DG40931 |
| MCPP | ND (2.69) | --- | 8151A | --- | 1 | 07/11/24 11:47 | D4G0206 | DG40931 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: DCAA* | *63 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-7
Date Sampled: 07/01/24 10:50
Percent Solids: 85
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 7/3/24 15:55

## 8100M Total Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **Total Petroleum Hydrocarbons (C9-C36)** | **15.7** (11.6) | --- | 8100M | --- | 1 | 07/09/24 23:12 | --- | DG40339 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: O-Terphenyl* | *86 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3
Client Sample ID: C-7
Date Sampled: 07/01/24 10:50
Percent Solids: 85

ESS Laboratory Work Order: 24G0132
ESS Laboratory Sample ID: 24G0132-20
Sample Matrix: Soil

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Conductivity** | **WL 345** (5) | --- | 9050A | --- | 1 | JLK | 07/03/24 18:48 | umhos/cm | DG40349 |
| **Corrosivity (pH)** | **7.62** (N/A) | --- | 9045 | --- | 1 | JLK | 07/02/24 21:30 | S.U. | DG40257 |
| **Corrosivity (pH) Sample Temp** | **21.4** | --- | 2550B | --- | 1 | JLK | 07/02/24 21:30 | °C | DG40257 |
| **Flashpoint** | **> 200** (N/A) | --- | 1010A | --- | 1 | EAM | 07/02/24 20:32 | °F | DG40254 |
| Free Liquid | ND (0.3) | --- | 9095A | --- | 1 | EAM | 07/03/24 18:23 | ml/5 min | DG40354 |
| Reactive Cyanide | ND (2.0) | --- | 7.3.3.2 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |
| Reactive Sulfide | ND (2.0) | --- | 7.3.4.1 | --- | 1 | EAM | 07/05/24 15:21 | mg/kg | DG40541 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch DG40518 - 3050B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Arsenic | ND | 2.35 | mg/kg wet | | | | | | | |
| Barium | ND | 0.94 | mg/kg wet | | | | | | | |
| Cadmium | ND | 0.47 | mg/kg wet | | | | | | | |
| Chromium | ND | 0.94 | mg/kg wet | | | | | | | |
| Lead | ND | 4.69 | mg/kg wet | | | | | | | |
| Selenium | ND | 4.69 | mg/kg wet | | | | | | | |
| Silver | ND | 0.47 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Arsenic | 303 | 7.04 | mg/kg wet | 360.0 | | 84 | 80-120 | | | |
| Barium | 305 | 2.82 | mg/kg wet | 332.0 | | 92 | 80-120 | | | |
| Cadmium | 211 | 1.41 | mg/kg wet | 238.0 | | 89 | 80-120 | | | |
| Chromium | 190 | 2.82 | mg/kg wet | 199.0 | | 95 | 80-120 | | | |
| Lead | 87.6 | 14.1 | mg/kg wet | 100.0 | | 88 | 80-120 | | | |
| Selenium | 157 | 14.1 | mg/kg wet | 170.0 | | 92 | 80-120 | | | |
| Silver | 77.1 | 1.41 | mg/kg wet | 88.60 | | 87 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Arsenic | 304 | 7.94 | mg/kg wet | 360.0 | | 85 | 80-120 | 0.5 | 30 | |
| Barium | 311 | 3.17 | mg/kg wet | 332.0 | | 94 | 80-120 | 2 | 30 | |
| Cadmium | 223 | 1.59 | mg/kg wet | 238.0 | | 94 | 80-120 | 6 | 30 | |
| Chromium | 189 | 3.17 | mg/kg wet | 199.0 | | 95 | 80-120 | 0.3 | 30 | |
| Lead | 90.6 | 15.9 | mg/kg wet | 100.0 | | 91 | 80-120 | 3 | 30 | |
| Selenium | 158 | 15.9 | mg/kg wet | 170.0 | | 93 | 80-120 | 0.9 | 30 | |
| Silver | 79.4 | 1.59 | mg/kg wet | 88.60 | | 90 | 80-120 | 3 | 30 | |
| **Batch DG40816 - 7471B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Mercury | ND | 0.032 | mg/kg wet | | | | | | | |
| **LCS** | | | | | | | | | | |
| Mercury | 14.7 | 3.19 | mg/kg wet | 14.40 | | 102 | 80-120 | | | |
| **LCS Dup** | | | | | | | | | | |
| Mercury | 15.5 | 3.09 | mg/kg wet | 14.40 | | 108 | 80-120 | 5 | 30 | |
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40306 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40306 - 5035** | | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dioxane | ND | 0.100 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Acetone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromoform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Carbon Disulfide | ND | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Chloroform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromomethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40306 - 5035** | | | | | | | | | | |
| Methylene Chloride | ND | 0.0250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.0050 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 0.0200 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.0100 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.0050 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.0100 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0501* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0476* | | mg/kg wet | *0.05000* | | *95* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0457* | | mg/kg wet | *0.05000* | | *91* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0509* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| 1,1,1-Trichloroethane | 0.0496 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 0.0444 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 40-160 | | | |
| 1,1,2-Trichloroethane | 0.0478 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| 1,1-Dichloroethane | 0.0482 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| 1,1-Dichloroethene | 0.0511 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,1-Dichloropropene | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| 1,2,3-Trichloropropane | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 0.0508 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0461 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | | | |
| 1,2-Dibromoethane | 0.0492 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| 1,2-Dichlorobenzene | 0.0470 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| 1,2-Dichloroethane | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| 1,2-Dichloropropane | 0.0493 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0514 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,3-Dichlorobenzene | 0.0477 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| 1,3-Dichloropropane | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| 1,4-Dichlorobenzene | 0.0472 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | | | |
| 1,4-Dioxane | 0.944 | 0.100 | mg/kg wet | 1.000 | | 94 | 70-130 | | | |
| 2,2-Dichloropropane | 0.0579 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40306 - 5035** | | | | | | | | | | |
| 2-Butanone | 0.251 | 0.0500 | mg/kg wet | 0.2500 | | 100 | 40-160 | | | |
| 2-Chlorotoluene | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| 2-Hexanone | 0.244 | 0.0500 | mg/kg wet | 0.2500 | | 98 | 40-160 | | | |
| 4-Chlorotoluene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | | | |
| 4-Isopropyltoluene | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 0.219 | 0.0500 | mg/kg wet | 0.2500 | | 88 | 40-160 | | | |
| Acetone | 0.337 | 0.0500 | mg/kg wet | 0.2500 | | 135 | 40-160 | | | |
| Benzene | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Bromobenzene | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Bromochloromethane | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Bromodichloromethane | 0.0526 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| Bromoform | 0.0446 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 40-160 | | | |
| Bromomethane | 0.0504 | 0.0100 | mg/kg wet | 0.05000 | | 101 | 40-160 | | | |
| Carbon Disulfide | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Carbon Tetrachloride | 0.0504 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Chlorobenzene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| Chloroethane | 0.0506 | 0.0100 | mg/kg wet | 0.05000 | | 101 | 40-160 | | | |
| Chloroform | 0.0481 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Chloromethane | 0.0432 | 0.0100 | mg/kg wet | 0.05000 | | 86 | 40-160 | | | |
| cis-1,2-Dichloroethene | 0.0503 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| cis-1,3-Dichloropropene | 0.0555 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 40-160 | | | |
| Dibromochloromethane | 0.0550 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 40-160 | | | |
| Dibromomethane | 0.0500 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| Dichlorodifluoromethane | 0.0300 | 0.0100 | mg/kg wet | 0.05000 | | 60 | 40-160 | | | |
| Diethyl Ether | 0.0552 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| Di-isopropyl ether | 0.0536 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 0.0541 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Ethylbenzene | 0.0512 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | | | |
| Hexachlorobutadiene | 0.0457 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 40-160 | | | |
| Isopropylbenzene | 0.0564 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | | | |
| Methyl tert-Butyl Ether | 0.0535 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| Methylene Chloride | 0.0492 | 0.0250 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| Naphthalene | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 40-160 | | | |
| n-Butylbenzene | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| n-Propylbenzene | 0.0499 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| sec-Butylbenzene | 0.0474 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | | | |
| Styrene | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 40-160 | | | |
| tert-Butylbenzene | 0.0500 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| Tertiary-amyl methyl ether | 0.0540 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| Tetrachloroethene | 0.0436 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 70-130 | | | |
| Tetrahydrofuran | 0.0478 | 0.0200 | mg/kg wet | 0.05000 | | 96 | 70-130 | | | |
| Toluene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | | | |
| trans-1,2-Dichloroethene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| trans-1,3-Dichloropropene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | | | |
| Trichloroethene | 0.0465 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40306 - 5035** | | | | | | | | | | |
| Trichlorofluoromethane | 0.0473 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 40-160 | | | |
| Vinyl Chloride | 0.0410 | 0.0100 | mg/kg wet | 0.05000 | | 82 | 70-130 | | | |
| Xylene O | 0.0526 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| Xylene P,M | 0.104 | 0.0100 | mg/kg wet | 0.1000 | | 104 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0473* | | mg/kg wet | *0.05000* | | *95* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0512* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0483* | | mg/kg wet | *0.05000* | | *97* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0497* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 3 | 20 | |
| 1,1,1-Trichloroethane | 0.0473 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 5 | 20 | |
| 1,1,2,2-Tetrachloroethane | 0.0428 | 0.0050 | mg/kg wet | 0.05000 | | 86 | 40-160 | 4 | 20 | |
| 1,1,2-Trichloroethane | 0.0453 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | 5 | 20 | |
| 1,1-Dichloroethane | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 5 | 20 | |
| 1,1-Dichloroethene | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 3 | 20 | |
| 1,1-Dichloropropene | 0.0481 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 4 | 20 | |
| 1,2,3-Trichlorobenzene | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 0.9 | 20 | |
| 1,2,3-Trichloropropane | 0.0433 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 70-130 | 5 | 20 | |
| 1,2,4-Trichlorobenzene | 0.0511 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 0.5 | 20 | |
| 1,2,4-Trimethylbenzene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 3 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 0.0449 | 0.0050 | mg/kg wet | 0.05000 | | 90 | 70-130 | 3 | 20 | |
| 1,2-Dibromoethane | 0.0472 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 4 | 20 | |
| 1,2-Dichlorobenzene | 0.0456 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | 3 | 20 | |
| 1,2-Dichloroethane | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 6 | 20 | |
| 1,2-Dichloropropane | 0.0467 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 5 | 20 | |
| 1,3,5-Trimethylbenzene | 0.0493 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 4 | 20 | |
| 1,3-Dichlorobenzene | 0.0459 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 4 | 20 | |
| 1,3-Dichloropropane | 0.0483 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 4 | 20 | |
| 1,4-Dichlorobenzene | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 3 | 20 | |
| 1,4-Dioxane | 0.968 | 0.100 | mg/kg wet | 1.000 | | 97 | 70-130 | 3 | 20 | |
| 2,2-Dichloropropane | 0.0547 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 6 | 20 | |
| 2-Butanone | 0.221 | 0.0500 | mg/kg wet | 0.2500 | | 88 | 40-160 | 12 | 20 | |
| 2-Chlorotoluene | 0.0485 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 4 | 20 | |
| 2-Hexanone | 0.218 | 0.0500 | mg/kg wet | 0.2500 | | 87 | 40-160 | 11 | 20 | |
| 4-Chlorotoluene | 0.0476 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 4 | 20 | |
| 4-Isopropyltoluene | 0.0465 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 2 | 20 | |
| 4-Methyl-2-Pentanone | 0.210 | 0.0500 | mg/kg wet | 0.2500 | | 84 | 40-160 | 4 | 20 | |
| Acetone | 0.240 | 0.0500 | mg/kg wet | 0.2500 | | 96 | 40-160 | 34 | 20 | D+ |
| Benzene | 0.0471 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 70-130 | 4 | 20 | |
| Bromobenzene | 0.0488 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 4 | 20 | |
| Bromochloromethane | 0.0479 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 5 | 20 | |
| Bromodichloromethane | 0.0500 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 5 | 20 | |
| Bromoform | 0.0434 | 0.0050 | mg/kg wet | 0.05000 | | 87 | 40-160 | 3 | 20 | |
| Bromomethane | 0.0476 | 0.0100 | mg/kg wet | 0.05000 | | 95 | 40-160 | 6 | 20 | |
| Carbon Disulfide | 0.0513 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 3 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40306 - 5035** | | | | | | | | | | |
| Carbon Tetrachloride | 0.0487 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| Chlorobenzene | 0.0467 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 4 | 20 | |
| Chloroethane | 0.0480 | 0.0100 | mg/kg wet | 0.05000 | | 96 | 40-160 | 5 | 20 | |
| Chloroform | 0.0457 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 70-130 | 5 | 20 | |
| Chloromethane | 0.0415 | 0.0100 | mg/kg wet | 0.05000 | | 83 | 40-160 | 4 | 20 | |
| cis-1,2-Dichloroethene | 0.0480 | 0.0050 | mg/kg wet | 0.05000 | | 96 | 70-130 | 5 | 20 | |
| cis-1,3-Dichloropropene | 0.0528 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 40-160 | 5 | 20 | |
| Dibromochloromethane | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 40-160 | 4 | 20 | |
| Dibromomethane | 0.0476 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 5 | 20 | |
| Dichlorodifluoromethane | 0.0277 | 0.0100 | mg/kg wet | 0.05000 | | 55 | 40-160 | 8 | 20 | |
| Diethyl Ether | 0.0529 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 4 | 20 | |
| Di-isopropyl ether | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | 6 | 20 | |
| Ethyl tertiary-butyl ether | 0.0515 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 5 | 20 | |
| Ethylbenzene | 0.0498 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 3 | 20 | |
| Hexachlorobutadiene | 0.0460 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 40-160 | 0.7 | 20 | |
| Isopropylbenzene | 0.0546 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 3 | 20 | |
| Methyl tert-Butyl Ether | 0.0511 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 5 | 20 | |
| Methylene Chloride | 0.0468 | 0.0250 | mg/kg wet | 0.05000 | | 94 | 70-130 | 5 | 20 | |
| Naphthalene | 0.0483 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 40-160 | 2 | 20 | |
| n-Butylbenzene | 0.0490 | 0.0050 | mg/kg wet | 0.05000 | | 98 | 70-130 | 2 | 20 | |
| n-Propylbenzene | 0.0483 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| sec-Butylbenzene | 0.0458 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 3 | 20 | |
| Styrene | 0.0512 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 40-160 | 4 | 20 | |
| tert-Butylbenzene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 70-130 | 3 | 20 | |
| Tertiary-amyl methyl ether | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | 5 | 20 | |
| Tetrachloroethene | 0.0417 | 0.0050 | mg/kg wet | 0.05000 | | 83 | 70-130 | 4 | 20 | |
| Tetrahydrofuran | 0.0469 | 0.0200 | mg/kg wet | 0.05000 | | 94 | 70-130 | 2 | 20 | |
| Toluene | 0.0467 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 4 | 20 | |
| trans-1,2-Dichloroethene | 0.0476 | 0.0050 | mg/kg wet | 0.05000 | | 95 | 70-130 | 4 | 20 | |
| trans-1,3-Dichloropropene | 0.0467 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | 4 | 20 | |
| Trichloroethene | 0.0445 | 0.0050 | mg/kg wet | 0.05000 | | 89 | 70-130 | 4 | 20 | |
| Trichlorofluoromethane | 0.0454 | 0.0050 | mg/kg wet | 0.05000 | | 91 | 40-160 | 4 | 20 | |
| Vinyl Chloride | 0.0365 | 0.0100 | mg/kg wet | 0.05000 | | 73 | 70-130 | 12 | 20 | |
| Xylene O | 0.0509 | 0.0050 | mg/kg wet | 0.05000 | | 102 | 70-130 | 3 | 20 | |
| Xylene P,M | 0.100 | 0.0100 | mg/kg wet | 0.1000 | | 100 | 70-130 | 4 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0469* | | mg/kg wet | *0.05000* | | *94* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0515* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0476* | | mg/kg wet | *0.05000* | | *95* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0494* | | mg/kg wet | *0.05000* | | *99* | *70-130* | | | |
| **Batch DG40319 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40319 - 5035** | | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,1-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,3-Trichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromo-3-Chloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloroethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,3-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 1,4-Dioxane | ND | 0.100 | mg/kg wet | | | | | | | |
| 2,2-Dichloropropane | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Butanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 2-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 2-Hexanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| 4-Chlorotoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Isopropyltoluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| 4-Methyl-2-Pentanone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Acetone | ND | 0.0500 | mg/kg wet | | | | | | | |
| Benzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromodichloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromoform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Bromomethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Carbon Disulfide | ND | 0.0050 | mg/kg wet | | | | | | | |
| Carbon Tetrachloride | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chlorobenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloroethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Chloroform | ND | 0.0050 | mg/kg wet | | | | | | | |
| Chloromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromochloromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dibromomethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Dichlorodifluoromethane | ND | 0.0100 | mg/kg wet | | | | | | | |
| Diethyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Di-isopropyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40319 - 5035** | | | | | | | | | | |
| Ethyl tertiary-butyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Isopropylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Methylene Chloride | ND | 0.0250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| n-Propylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| sec-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Styrene | ND | 0.0050 | mg/kg wet | | | | | | | |
| tert-Butylbenzene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tertiary-amyl methyl ether | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrachloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Tetrahydrofuran | ND | 0.0200 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichloroethene | ND | 0.0050 | mg/kg wet | | | | | | | |
| Trichlorofluoromethane | ND | 0.0050 | mg/kg wet | | | | | | | |
| Vinyl Chloride | ND | 0.0100 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.0050 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.0100 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0515* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0480* | | mg/kg wet | *0.05000* | | *96* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0513* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0513* | | mg/kg wet | *0.05000* | | *103* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0539 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| 1,1,1-Trichloroethane | 0.0528 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 0.0526 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 40-160 | | | |
| 1,1,2-Trichloroethane | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| 1,1-Dichloroethane | 0.0541 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| 1,1-Dichloroethene | 0.0632 | 0.0050 | mg/kg wet | 0.05000 | | 126 | 70-130 | | | |
| 1,1-Dichloropropene | 0.0547 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| 1,2,3-Trichloropropane | 0.0501 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 0.0538 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0582 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | | | |
| 1,2-Dibromo-3-Chloropropane | 0.0465 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |
| 1,2-Dibromoethane | 0.0543 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | | | |
| 1,2-Dichlorobenzene | 0.0517 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| 1,2-Dichloroethane | 0.0505 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| 1,2-Dichloropropane | 0.0555 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0576 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40319 - 5035** | | | | | | | | | | |
| 1,3-Dichlorobenzene | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | | | |
| 1,3-Dichloropropane | 0.0560 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | | | |
| 1,4-Dichlorobenzene | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| 1,4-Dioxane | 1.29 | 0.100 | mg/kg wet | 1.000 | | 129 | 70-130 | | | |
| 2,2-Dichloropropane | 0.0532 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| 2-Butanone | 0.250 | 0.0500 | mg/kg wet | 0.2500 | | 100 | 40-160 | | | |
| 2-Chlorotoluene | 0.0560 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | | | |
| 2-Hexanone | 0.236 | 0.0500 | mg/kg wet | 0.2500 | | 95 | 40-160 | | | |
| 4-Chlorotoluene | 0.0555 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| 4-Isopropyltoluene | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| 4-Methyl-2-Pentanone | 0.254 | 0.0500 | mg/kg wet | 0.2500 | | 102 | 40-160 | | | |
| Acetone | 0.258 | 0.0500 | mg/kg wet | 0.2500 | | 103 | 40-160 | | | |
| Benzene | 0.0560 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | | | |
| Bromobenzene | 0.0556 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| Bromochloromethane | 0.0551 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| Bromodichloromethane | 0.0553 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | | | |
| Bromoform | 0.0465 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 40-160 | | | |
| Bromomethane | 0.0608 | 0.0100 | mg/kg wet | 0.05000 | | 122 | 40-160 | | | |
| Carbon Disulfide | 0.0647 | 0.0050 | mg/kg wet | 0.05000 | | 129 | 70-130 | | | |
| Carbon Tetrachloride | 0.0506 | 0.0050 | mg/kg wet | 0.05000 | | 101 | 70-130 | | | |
| Chlorobenzene | 0.0516 | 0.0050 | mg/kg wet | 0.05000 | | 103 | 70-130 | | | |
| Chloroethane | 0.0595 | 0.0100 | mg/kg wet | 0.05000 | | 119 | 40-160 | | | |
| Chloroform | 0.0523 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| Chloromethane | 0.0562 | 0.0100 | mg/kg wet | 0.05000 | | 112 | 40-160 | | | |
| cis-1,2-Dichloroethene | 0.0575 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | | | |
| cis-1,3-Dichloropropene | 0.0599 | 0.0050 | mg/kg wet | 0.05000 | | 120 | 40-160 | | | |
| Dibromochloromethane | 0.0531 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 40-160 | | | |
| Dibromomethane | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | | | |
| Dichlorodifluoromethane | 0.0330 | 0.0100 | mg/kg wet | 0.05000 | | 66 | 40-160 | | | |
| Diethyl Ether | 0.0667 | 0.0050 | mg/kg wet | 0.05000 | | 133 | 70-130 | | | B+ |
| Di-isopropyl ether | 0.0617 | 0.0050 | mg/kg wet | 0.05000 | | 123 | 70-130 | | | |
| Ethyl tertiary-butyl ether | 0.0646 | 0.0050 | mg/kg wet | 0.05000 | | 129 | 70-130 | | | |
| Ethylbenzene | 0.0565 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | | | |
| Hexachlorobutadiene | 0.0486 | 0.0050 | mg/kg wet | 0.05000 | | 97 | 40-160 | | | |
| Isopropylbenzene | 0.0655 | 0.0050 | mg/kg wet | 0.05000 | | 131 | 70-130 | | | B+ |
| Methyl tert-Butyl Ether | 0.0610 | 0.0050 | mg/kg wet | 0.05000 | | 122 | 70-130 | | | |
| Methylene Chloride | 0.0622 | 0.0250 | mg/kg wet | 0.05000 | | 124 | 70-130 | | | |
| Naphthalene | 0.0551 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 40-160 | | | |
| n-Butylbenzene | 0.0560 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | | | |
| n-Propylbenzene | 0.0572 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | | | |
| sec-Butylbenzene | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | | | |
| Styrene | 0.0563 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 40-160 | | | |
| tert-Butylbenzene | 0.0576 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | | | |
| Tertiary-amyl methyl ether | 0.0655 | 0.0050 | mg/kg wet | 0.05000 | | 131 | 70-130 | | | B+ |
| Tetrachloroethene | 0.0463 | 0.0050 | mg/kg wet | 0.05000 | | 93 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40319 - 5035** | | | | | | | | | | |
| Tetrahydrofuran | 0.0625 | 0.0200 | mg/kg wet | 0.05000 | | 125 | 70-130 | | | |
| Toluene | 0.0547 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | | | |
| trans-1,2-Dichloroethene | 0.0585 | 0.0050 | mg/kg wet | 0.05000 | | 117 | 70-130 | | | |
| trans-1,3-Dichloropropene | 0.0559 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | | | |
| Trichloroethene | 0.0526 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | | | |
| Trichlorofluoromethane | 0.0540 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 40-160 | | | |
| Vinyl Chloride | 0.0535 | 0.0100 | mg/kg wet | 0.05000 | | 107 | 70-130 | | | |
| Xylene O | 0.0568 | 0.0050 | mg/kg wet | 0.05000 | | 114 | 70-130 | | | |
| Xylene P,M | 0.113 | 0.0100 | mg/kg wet | 0.1000 | | 113 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0485* | | mg/kg wet | *0.05000* | | *97* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0501* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0508* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0507* | | mg/kg wet | *0.05000* | | *101* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0542 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 0.6 | 20 | |
| 1,1,1-Trichloroethane | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 0.3 | 20 | |
| 1,1,2,2-Tetrachloroethane | 0.0603 | 0.0050 | mg/kg wet | 0.05000 | | 121 | 40-160 | 14 | 20 | |
| 1,1,2-Trichloroethane | 0.0525 | 0.0050 | mg/kg wet | 0.05000 | | 105 | 70-130 | 2 | 20 | |
| 1,1-Dichloroethane | 0.0537 | 0.0050 | mg/kg wet | 0.05000 | | 107 | 70-130 | 0.9 | 20 | |
| 1,1-Dichloroethene | 0.0628 | 0.0050 | mg/kg wet | 0.05000 | | 126 | 70-130 | 0.6 | 20 | |
| 1,1-Dichloropropene | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 0.3 | 20 | |
| 1,2,3-Trichlorobenzene | 0.0587 | 0.0050 | mg/kg wet | 0.05000 | | 117 | 70-130 | 11 | 20 | |
| 1,2,3-Trichloropropane | 0.0573 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | 13 | 20 | |
| 1,2,4-Trichlorobenzene | 0.0604 | 0.0050 | mg/kg wet | 0.05000 | | 121 | 70-130 | 12 | 20 | |
| 1,2,4-Trimethylbenzene | 0.0651 | 0.0050 | mg/kg wet | 0.05000 | | 130 | 70-130 | 11 | 20 | |
| 1,2-Dibromo-3-Chloropropane | 0.0554 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | 17 | 20 | |
| 1,2-Dibromoethane | 0.0554 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 70-130 | 2 | 20 | |
| 1,2-Dichlorobenzene | 0.0575 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | 11 | 20 | |
| 1,2-Dichloroethane | 0.0494 | 0.0050 | mg/kg wet | 0.05000 | | 99 | 70-130 | 2 | 20 | |
| 1,2-Dichloropropane | 0.0547 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 1 | 20 | |
| 1,3,5-Trimethylbenzene | 0.0650 | 0.0050 | mg/kg wet | 0.05000 | | 130 | 70-130 | 12 | 20 | |
| 1,3-Dichlorobenzene | 0.0580 | 0.0050 | mg/kg wet | 0.05000 | | 116 | 70-130 | 11 | 20 | |
| 1,3-Dichloropropane | 0.0559 | 0.0050 | mg/kg wet | 0.05000 | | 112 | 70-130 | 0.2 | 20 | |
| 1,4-Dichlorobenzene | 0.0565 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | 11 | 20 | |
| 1,4-Dioxane | 1.33 | 0.100 | mg/kg wet | 1.000 | | 133 | 70-130 | 3 | 20 | B+ |
| 2,2-Dichloropropane | 0.0530 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 0.3 | 20 | |
| 2-Butanone | 0.246 | 0.0500 | mg/kg wet | 0.2500 | | 98 | 40-160 | 2 | 20 | |
| 2-Chlorotoluene | 0.0635 | 0.0050 | mg/kg wet | 0.05000 | | 127 | 70-130 | 13 | 20 | |
| 2-Hexanone | 0.242 | 0.0500 | mg/kg wet | 0.2500 | | 97 | 40-160 | 2 | 20 | |
| 4-Chlorotoluene | 0.0620 | 0.0050 | mg/kg wet | 0.05000 | | 124 | 70-130 | 11 | 20 | |
| 4-Isopropyltoluene | 0.0600 | 0.0050 | mg/kg wet | 0.05000 | | 120 | 70-130 | 12 | 20 | |
| 4-Methyl-2-Pentanone | 0.259 | 0.0500 | mg/kg wet | 0.2500 | | 104 | 40-160 | 2 | 20 | |
| Acetone | 0.232 | 0.0500 | mg/kg wet | 0.2500 | | 93 | 40-160 | 11 | 20 | |
| Benzene | 0.0551 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 2 | 20 | |
| Bromobenzene | 0.0625 | 0.0050 | mg/kg wet | 0.05000 | | 125 | 70-130 | 12 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics Low Level** | | | | | | | | | | |
| **Batch DG40319 - 5035** | | | | | | | | | | |
| Bromochloromethane | 0.0551 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 0.07 | 20 | |
| Bromodichloromethane | 0.0544 | 0.0050 | mg/kg wet | 0.05000 | | 109 | 70-130 | 2 | 20 | |
| Bromoform | 0.0472 | 0.0050 | mg/kg wet | 0.05000 | | 94 | 40-160 | 1 | 20 | |
| Bromomethane | 0.0605 | 0.0100 | mg/kg wet | 0.05000 | | 121 | 40-160 | 0.6 | 20 | |
| Carbon Disulfide | 0.0650 | 0.0050 | mg/kg wet | 0.05000 | | 130 | 70-130 | 0.5 | 20 | |
| Carbon Tetrachloride | 0.0500 | 0.0050 | mg/kg wet | 0.05000 | | 100 | 70-130 | 1 | 20 | |
| Chlorobenzene | 0.0518 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 0.4 | 20 | |
| Chloroethane | 0.0590 | 0.0100 | mg/kg wet | 0.05000 | | 118 | 40-160 | 0.7 | 20 | |
| Chloroform | 0.0520 | 0.0050 | mg/kg wet | 0.05000 | | 104 | 70-130 | 0.7 | 20 | |
| Chloromethane | 0.0553 | 0.0100 | mg/kg wet | 0.05000 | | 111 | 40-160 | 2 | 20 | |
| cis-1,2-Dichloroethene | 0.0577 | 0.0050 | mg/kg wet | 0.05000 | | 115 | 70-130 | 0.3 | 20 | |
| cis-1,3-Dichloropropene | 0.0588 | 0.0050 | mg/kg wet | 0.05000 | | 118 | 40-160 | 2 | 20 | |
| Dibromochloromethane | 0.0528 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 40-160 | 0.4 | 20 | |
| Dibromomethane | 0.0538 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 2 | 20 | |
| Dichlorodifluoromethane | 0.0331 | 0.0100 | mg/kg wet | 0.05000 | | 66 | 40-160 | 0.3 | 20 | |
| Diethyl Ether | 0.0660 | 0.0050 | mg/kg wet | 0.05000 | | 132 | 70-130 | 1 | 20 | B+ |
| Di-isopropyl ether | 0.0603 | 0.0050 | mg/kg wet | 0.05000 | | 121 | 70-130 | 2 | 20 | |
| Ethyl tertiary-butyl ether | 0.0636 | 0.0050 | mg/kg wet | 0.05000 | | 127 | 70-130 | 2 | 20 | |
| Ethylbenzene | 0.0567 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | 0.4 | 20 | |
| Hexachlorobutadiene | 0.0549 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 40-160 | 12 | 20 | |
| Isopropylbenzene | 0.0741 | 0.0050 | mg/kg wet | 0.05000 | | 148 | 70-130 | 12 | 20 | B+ |
| Methyl tert-Butyl Ether | 0.0606 | 0.0050 | mg/kg wet | 0.05000 | | 121 | 70-130 | 0.7 | 20 | |
| Methylene Chloride | 0.0613 | 0.0250 | mg/kg wet | 0.05000 | | 123 | 70-130 | 2 | 20 | |
| Naphthalene | 0.0632 | 0.0050 | mg/kg wet | 0.05000 | | 126 | 40-160 | 14 | 20 | |
| n-Butylbenzene | 0.0637 | 0.0050 | mg/kg wet | 0.05000 | | 127 | 70-130 | 13 | 20 | |
| n-Propylbenzene | 0.0645 | 0.0050 | mg/kg wet | 0.05000 | | 129 | 70-130 | 12 | 20 | |
| sec-Butylbenzene | 0.0601 | 0.0050 | mg/kg wet | 0.05000 | | 120 | 70-130 | 13 | 20 | |
| Styrene | 0.0557 | 0.0050 | mg/kg wet | 0.05000 | | 111 | 40-160 | 1 | 20 | |
| tert-Butylbenzene | 0.0653 | 0.0050 | mg/kg wet | 0.05000 | | 131 | 70-130 | 13 | 20 | B+ |
| Tertiary-amyl methyl ether | 0.0644 | 0.0050 | mg/kg wet | 0.05000 | | 129 | 70-130 | 2 | 20 | |
| Tetrachloroethene | 0.0460 | 0.0050 | mg/kg wet | 0.05000 | | 92 | 70-130 | 0.8 | 20 | |
| Tetrahydrofuran | 0.0657 | 0.0200 | mg/kg wet | 0.05000 | | 131 | 70-130 | 5 | 20 | B+ |
| Toluene | 0.0540 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 70-130 | 1 | 20 | |
| trans-1,2-Dichloroethene | 0.0586 | 0.0050 | mg/kg wet | 0.05000 | | 117 | 70-130 | 0.1 | 20 | |
| trans-1,3-Dichloropropene | 0.0552 | 0.0050 | mg/kg wet | 0.05000 | | 110 | 70-130 | 1 | 20 | |
| Trichloroethene | 0.0528 | 0.0050 | mg/kg wet | 0.05000 | | 106 | 70-130 | 0.4 | 20 | |
| Trichlorofluoromethane | 0.0541 | 0.0050 | mg/kg wet | 0.05000 | | 108 | 40-160 | 0.2 | 20 | |
| Vinyl Chloride | 0.0536 | 0.0100 | mg/kg wet | 0.05000 | | 107 | 70-130 | 0.3 | 20 | |
| Xylene O | 0.0564 | 0.0050 | mg/kg wet | 0.05000 | | 113 | 70-130 | 0.7 | 20 | |
| Xylene P,M | 0.113 | 0.0100 | mg/kg wet | 0.1000 | | 113 | 70-130 | 0.1 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *0.0476* | | mg/kg wet | *0.05000* | | *95* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0472* | | mg/kg wet | *0.05000* | | *94* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *0.0500* | | mg/kg wet | *0.05000* | | *100* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *0.0511* | | mg/kg wet | *0.05000* | | *102* | *70-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DG40337 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DG40337 - 3546** | | | | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyridine | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.48* | | mg/kg wet | *2.500* | | *99* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *2.96* | | mg/kg wet | *3.750* | | *79* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.96* | | mg/kg wet | *3.750* | | *106* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.45* | | mg/kg wet | *2.500* | | *98* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.80* | | mg/kg wet | *3.750* | | *101* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.47* | | mg/kg wet | *2.500* | | *99* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.57* | | mg/kg wet | *3.750* | | *95* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.98* | | mg/kg wet | *2.500* | | *119* | *30-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.51 | 0.025 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 2.08 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| 1,2-Dichlorobenzene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| 1,3-Dichlorobenzene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.36 | 0.250 | mg/kg wet | 2.500 | | 94 | 30-130 | | | |
| 2,4-Dichlorophenol | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 30-130 | | | |
| 2,4-Dimethylphenol | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 30-130 | | | |
| 2,4-Dinitrophenol | 2.33 | 1.00 | mg/kg wet | 2.500 | | 93 | 15-140 | | | |
| 2,4-Dinitrotoluene | 2.29 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| 2-Chloronaphthalene | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| 2-Chlorophenol | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 30-130 | | | |
| 2-Methylnaphthalene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| 2-Methylphenol | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 15-140 | | | |
| 2-Nitrophenol | 2.19 | 0.500 | mg/kg wet | 2.500 | | 88 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.06 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| 3+4-Methylphenol | 4.21 | 0.250 | mg/kg wet | 5.000 | | 84 | 15-140 | | | |
| 4-Bromophenyl-phenylether | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DG40337 - 3546** | | | | | | | | | | |
| 4-Chloroaniline | 1.81 | 0.250 | mg/kg wet | 2.500 | | 73 | 15-140 | | | |
| 4-Nitrophenol | 1.55 | 1.00 | mg/kg wet | 2.500 | | 62 | 15-140 | | | |
| Acenaphthene | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| Acenaphthylene | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Acetophenone | 2.14 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Aniline | 1.47 | 0.250 | mg/kg wet | 2.500 | | 59 | 40-140 | | | |
| Anthracene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Azobenzene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Benzo(a)anthracene | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Benzo(a)pyrene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 1.84 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 1.98 | 0.250 | mg/kg wet | 2.500 | | 79 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.57 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | | | |
| Butylbenzylphthalate | 2.76 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | | | |
| Chrysene | 2.34 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| Dibenzofuran | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Diethylphthalate | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Dimethylphthalate | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 15-140 | | | |
| Di-n-butylphthalate | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Di-n-octylphthalate | 3.20 | 0.500 | mg/kg wet | 2.500 | | 128 | 40-140 | | | |
| Fluoranthene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Fluorene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Hexachlorobenzene | 2.29 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Hexachlorobutadiene | 2.05 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Hexachloroethane | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Isophorone | 1.85 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| Naphthalene | 2.01 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Nitrobenzene | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| N-Nitrosodimethylamine | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Pentachlorophenol | 1.87 | 1.00 | mg/kg wet | 2.500 | | 75 | 15-140 | | | |
| Phenanthrene | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| Phenol | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 15-140 | | | |
| Pyrene | 3.00 | 0.250 | mg/kg wet | 2.500 | | 120 | 40-140 | | | |
| Pyridine | 1.63 | 0.250 | mg/kg wet | 2.500 | | 65 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.31* | | mg/kg wet | *2.500* | | *92* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.33* | | mg/kg wet | *3.750* | | *89* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.62* | | mg/kg wet | *3.750* | | *97* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.47* | | mg/kg wet | *2.500* | | *99* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.37* | | mg/kg wet | *3.750* | | *90* | *30-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DG40337 - 3546** | | | | | | | | | | |
| *Surrogate: Nitrobenzene-d5* | *2.11* | | mg/kg wet | *2.500* | | *84* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.32* | | mg/kg wet | *3.750* | | *89* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.84* | | mg/kg wet | *2.500* | | *114* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.54 | 0.025 | mg/kg wet | 2.500 | | 102 | 40-140 | 1 | 30 | |
| 1,2,4-Trichlorobenzene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 2 | 30 | |
| 1,2-Dichlorobenzene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | 2 | 30 | |
| 1,3-Dichlorobenzene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 0.3 | 30 | |
| 1,4-Dichlorobenzene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | 2 | 30 | |
| 2,4,5-Trichlorophenol | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 30-130 | 3 | 30 | |
| 2,4,6-Trichlorophenol | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 30-130 | 1 | 30 | |
| 2,4-Dichlorophenol | 2.04 | 0.250 | mg/kg wet | 2.500 | | 82 | 30-130 | 4 | 30 | |
| 2,4-Dimethylphenol | 2.06 | 0.250 | mg/kg wet | 2.500 | | 82 | 30-130 | 2 | 30 | |
| 2,4-Dinitrophenol | 1.49 | 1.00 | mg/kg wet | 2.500 | | 60 | 15-140 | 44 | 30 | D+ |
| 2,4-Dinitrotoluene | 2.34 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 2 | 30 | |
| 2,6-Dinitrotoluene | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 0.7 | 30 | |
| 2-Chloronaphthalene | 2.59 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 1 | 30 | |
| 2-Chlorophenol | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 30-130 | 1 | 30 | |
| 2-Methylnaphthalene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 0.1 | 30 | |
| 2-Methylphenol | 2.04 | 0.250 | mg/kg wet | 2.500 | | 81 | 15-140 | 3 | 30 | |
| 2-Nitrophenol | 2.19 | 0.500 | mg/kg wet | 2.500 | | 87 | 30-130 | 0.3 | 30 | |
| 3,3´-Dichlorobenzidine | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 5 | 30 | |
| 3+4-Methylphenol | 4.02 | 0.250 | mg/kg wet | 5.000 | | 80 | 15-140 | 4 | 30 | |
| 4-Bromophenyl-phenylether | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 1 | 30 | |
| 4-Chloroaniline | 1.86 | 0.250 | mg/kg wet | 2.500 | | 74 | 15-140 | 2 | 30 | |
| 4-Nitrophenol | 1.73 | 1.00 | mg/kg wet | 2.500 | | 69 | 15-140 | 11 | 30 | |
| Acenaphthene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 2 | 30 | |
| Acenaphthylene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 2 | 30 | |
| Acetophenone | 2.06 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 3 | 30 | |
| Aniline | 1.44 | 0.250 | mg/kg wet | 2.500 | | 58 | 40-140 | 2 | 30 | |
| Anthracene | 2.55 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 2 | 30 | |
| Azobenzene | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 0.6 | 30 | |
| Benzo(a)anthracene | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 2 | 30 | |
| Benzo(a)pyrene | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 2 | 30 | |
| Benzo(b)fluoranthene | 2.43 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 0.3 | 30 | |
| Benzo(g,h,i)perylene | 2.55 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 9 | 30 | |
| Benzo(k)fluoranthene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 0.5 | 30 | |
| bis(2-Chloroethoxy)methane | 1.79 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | 3 | 30 | |
| bis(2-Chloroethyl)ether | 1.78 | 0.250 | mg/kg wet | 2.500 | | 71 | 40-140 | 11 | 30 | |
| bis(2-chloroisopropyl)Ether | 1.88 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | 4 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 5 | 30 | |
| Butylbenzylphthalate | 2.65 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | 4 | 30 | |
| Chrysene | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | 3 | 30 | |
| Dibenzo(a,h)Anthracene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 7 | 30 | |
| Dibenzofuran | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 2 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DG40337 - 3546** | | | | | | | | | | |
| Diethylphthalate | 2.36 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 3 | 30 | |
| Dimethylphthalate | 2.41 | 0.250 | mg/kg wet | 2.500 | | 96 | 15-140 | 1 | 30 | |
| Di-n-butylphthalate | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 0.8 | 30 | |
| Di-n-octylphthalate | 2.88 | 0.500 | mg/kg wet | 2.500 | | 115 | 40-140 | 10 | 30 | |
| Fluoranthene | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 40-140 | 7 | 30 | |
| Fluorene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 2 | 30 | |
| Hexachlorobenzene | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 0.8 | 30 | |
| Hexachlorobutadiene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | 0.5 | 30 | |
| Hexachloroethane | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 0.9 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 7 | 30 | |
| Isophorone | 1.81 | 0.250 | mg/kg wet | 2.500 | | 72 | 40-140 | 2 | 30 | |
| Naphthalene | 1.99 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 1 | 30 | |
| Nitrobenzene | 1.88 | 0.250 | mg/kg wet | 2.500 | | 75 | 40-140 | 1 | 30 | |
| N-Nitrosodimethylamine | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 3 | 30 | |
| Pentachlorophenol | 1.90 | 1.00 | mg/kg wet | 2.500 | | 76 | 15-140 | 2 | 30 | |
| Phenanthrene | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 3 | 30 | |
| Phenol | 2.14 | 0.250 | mg/kg wet | 2.500 | | 85 | 15-140 | 4 | 30 | |
| Pyrene | 2.83 | 0.250 | mg/kg wet | 2.500 | | 113 | 40-140 | 6 | 30 | |
| Pyridine | 1.63 | 0.250 | mg/kg wet | 2.500 | | 65 | 40-140 | 0.5 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.22* | | mg/kg wet | *2.500* | | *89* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.20* | | mg/kg wet | *3.750* | | *85* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.41* | | mg/kg wet | *3.750* | | *91* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.44* | | mg/kg wet | *2.500* | | *97* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.20* | | mg/kg wet | *3.750* | | *85* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *1.99* | | mg/kg wet | *2.500* | | *80* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.11* | | mg/kg wet | *3.750* | | *83* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.56* | | mg/kg wet | *2.500* | | *102* | *30-130* | | | |
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DG40302 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DG40302 - 3540C** | | | | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0212* | | mg/kg wet | *0.02500* | | *85* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0220* | | mg/kg wet | *0.02500* | | *88* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 85 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 80 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 86 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0221* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0196* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | 4 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 87 | 40-140 | 3 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 84 | 40-140 | 4 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 89 | 40-140 | 3 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0214* | | mg/kg wet | *0.02500* | | *86* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0223* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0202* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0204* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DG40533 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 4,4´-DDD | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDD [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDE [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT | ND | 0.0025 | mg/kg wet | | | | | | | |
| 4,4´-DDT [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Aldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| alpha-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| beta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Chlordane (Total) | ND | 0.0200 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DG40533 - 3546** | | | | | | | | | | |
| Chlordane (Total) [2C] | ND | 0.0200 | mg/kg wet | | | | | | | |
| delta-BHC | ND | 0.0025 | mg/kg wet | | | | | | | |
| delta-BHC [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Dieldrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan I [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan II [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endosulfan Sulfate [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone | ND | 0.0025 | mg/kg wet | | | | | | | |
| Endrin Ketone [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-BHC (Lindane) [2C] | ND | 0.0015 | mg/kg wet | | | | | | | |
| gamma-Chlordane | ND | 0.0025 | mg/kg wet | | | | | | | |
| gamma-Chlordane [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide | ND | 0.0025 | mg/kg wet | | | | | | | |
| Heptachlor Epoxide [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.0025 | mg/kg wet | | | | | | | |
| Hexachlorobenzene [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor | ND | 0.0025 | mg/kg wet | | | | | | | |
| Methoxychlor [2C] | ND | 0.0025 | mg/kg wet | | | | | | | |
| Toxaphene | ND | 0.125 | mg/kg wet | | | | | | | |
| Toxaphene [2C] | ND | 0.125 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0128* | | mg/kg wet | *0.01250* | | *103* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0124* | | mg/kg wet | *0.01250* | | *99* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0135* | | mg/kg wet | *0.01250* | | *108* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0126* | | mg/kg wet | *0.01250* | | *101* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 4,4´-DDD | 0.0150 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | | | |
| 4,4´-DDD [2C] | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| 4,4´-DDE | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | | | |
| 4,4´-DDE [2C] | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | | | |
| 4,4´-DDT | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | | | |
| 4,4´-DDT [2C] | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |
| Aldrin | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| Aldrin [2C] | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| alpha-BHC | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| alpha-BHC [2C] | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| alpha-Chlordane | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DG40533 - 3546** | | | | | | | | | | |
| alpha-Chlordane [2C] | 0.0127 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | | | |
| beta-BHC | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| beta-BHC [2C] | 0.0123 | 0.0025 | mg/kg wet | 0.01250 | | 98 | 40-140 | | | |
| delta-BHC | 0.0106 | 0.0025 | mg/kg wet | 0.01250 | | 85 | 40-140 | | | |
| delta-BHC [2C] | 0.0109 | 0.0025 | mg/kg wet | 0.01250 | | 87 | 40-140 | | | |
| Dieldrin | 0.0145 | 0.0025 | mg/kg wet | 0.01250 | | 116 | 40-140 | | | |
| Dieldrin [2C] | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| Endosulfan I | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Endosulfan I [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Endosulfan II | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | | | |
| Endosulfan II [2C] | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| Endosulfan Sulfate | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| Endosulfan Sulfate [2C] | 0.0128 | 0.0025 | mg/kg wet | 0.01250 | | 102 | 40-140 | | | |
| Endrin | 0.0140 | 0.0025 | mg/kg wet | 0.01250 | | 112 | 40-140 | | | |
| Endrin [2C] | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | | | |
| Endrin Ketone | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | | | |
| Endrin Ketone [2C] | 0.0138 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | | | |
| gamma-BHC (Lindane) | 0.0133 | 0.0015 | mg/kg wet | 0.01250 | | 106 | 40-140 | | | |
| gamma-BHC (Lindane) [2C] | 0.0131 | 0.0015 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| gamma-Chlordane | 0.0151 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | | | |
| gamma-Chlordane [2C] | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | | | |
| Heptachlor | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| Heptachlor [2C] | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | | | |
| Heptachlor Epoxide | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | | | |
| Heptachlor Epoxide [2C] | 0.0130 | 0.0025 | mg/kg wet | 0.01250 | | 104 | 40-140 | | | |
| Hexachlorobenzene | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Hexachlorobenzene [2C] | 0.0122 | 0.0025 | mg/kg wet | 0.01250 | | 97 | 40-140 | | | |
| Methoxychlor | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | | | |
| Methoxychlor [2C] | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0126* | | mg/kg wet | *0.01250* | | *101* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0122* | | mg/kg wet | *0.01250* | | *98* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0125* | | mg/kg wet | *0.01250* | | *100* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0120* | | mg/kg wet | *0.01250* | | *96* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 4,4´-DDD | 0.0152 | 0.0025 | mg/kg wet | 0.01250 | | 121 | 40-140 | 1 | 30 | |
| 4,4´-DDD [2C] | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 1 | 30 | |
| 4,4´-DDE | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 1 | 30 | |
| 4,4´-DDE [2C] | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 2 | 30 | |
| 4,4´-DDT | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 0.5 | 30 | |
| 4,4´-DDT [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 0.7 | 30 | |
| Aldrin | 0.0136 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 2 | 30 | |
| Aldrin [2C] | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | 3 | 30 | |
| alpha-BHC | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 3 | 30 | |
| alpha-BHC [2C] | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 3 | 30 | |
| alpha-Chlordane | 0.0132 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 1 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8081B Organochlorine Pesticides** | | | | | | | | | | |
| **Batch DG40533 - 3546** | | | | | | | | | | |
| alpha-Chlordane [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 2 | 30 | |
| beta-BHC | 0.0134 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 2 | 30 | |
| beta-BHC [2C] | 0.0126 | 0.0025 | mg/kg wet | 0.01250 | | 101 | 40-140 | 2 | 30 | |
| delta-BHC | 0.0108 | 0.0025 | mg/kg wet | 0.01250 | | 86 | 40-140 | 2 | 30 | |
| delta-BHC [2C] | 0.0111 | 0.0025 | mg/kg wet | 0.01250 | | 89 | 40-140 | 2 | 30 | |
| Dieldrin | 0.0147 | 0.0025 | mg/kg wet | 0.01250 | | 118 | 40-140 | 2 | 30 | |
| Dieldrin [2C] | 0.0144 | 0.0025 | mg/kg wet | 0.01250 | | 115 | 40-140 | 2 | 30 | |
| Endosulfan I | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 2 | 30 | |
| Endosulfan I [2C] | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | 2 | 30 | |
| Endosulfan II | 0.0141 | 0.0025 | mg/kg wet | 0.01250 | | 113 | 40-140 | 2 | 30 | |
| Endosulfan II [2C] | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | 2 | 30 | |
| Endosulfan Sulfate | 0.0131 | 0.0025 | mg/kg wet | 0.01250 | | 105 | 40-140 | 0.8 | 30 | |
| Endosulfan Sulfate [2C] | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 0.8 | 30 | |
| Endrin | 0.0143 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 2 | 30 | |
| Endrin [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 2 | 30 | |
| Endrin Ketone | 0.0142 | 0.0025 | mg/kg wet | 0.01250 | | 114 | 40-140 | 0.2 | 30 | |
| Endrin Ketone [2C] | 0.0139 | 0.0025 | mg/kg wet | 0.01250 | | 111 | 40-140 | 0.3 | 30 | |
| gamma-BHC (Lindane) | 0.0136 | 0.0015 | mg/kg wet | 0.01250 | | 109 | 40-140 | 2 | 30 | |
| gamma-BHC (Lindane) [2C] | 0.0134 | 0.0015 | mg/kg wet | 0.01250 | | 108 | 40-140 | 2 | 30 | |
| gamma-Chlordane | 0.0154 | 0.0025 | mg/kg wet | 0.01250 | | 123 | 40-140 | 2 | 30 | |
| gamma-Chlordane [2C] | 0.0150 | 0.0025 | mg/kg wet | 0.01250 | | 120 | 40-140 | 2 | 30 | |
| Heptachlor | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 110 | 40-140 | 2 | 30 | |
| Heptachlor [2C] | 0.0135 | 0.0025 | mg/kg wet | 0.01250 | | 108 | 40-140 | 3 | 30 | |
| Heptachlor Epoxide | 0.0137 | 0.0025 | mg/kg wet | 0.01250 | | 109 | 40-140 | 2 | 30 | |
| Heptachlor Epoxide [2C] | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 107 | 40-140 | 2 | 30 | |
| Hexachlorobenzene | 0.0133 | 0.0025 | mg/kg wet | 0.01250 | | 106 | 40-140 | 3 | 30 | |
| Hexachlorobenzene [2C] | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | 3 | 30 | |
| Methoxychlor | 0.0129 | 0.0025 | mg/kg wet | 0.01250 | | 103 | 40-140 | 0.4 | 30 | |
| Methoxychlor [2C] | 0.0125 | 0.0025 | mg/kg wet | 0.01250 | | 100 | 40-140 | 0.2 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0123* | | mg/kg wet | *0.01250* | | *98* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0120* | | mg/kg wet | *0.01250* | | *96* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0127* | | mg/kg wet | *0.01250* | | *101* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0120* | | mg/kg wet | *0.01250* | | *96* | *30-150* | | | |
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DG40931 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 2,4,5-T | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-T [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4,5-TP (Silvex) [2C] | ND | 0.010 | mg/kg wet | | | | | | | |
| 2,4-D | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-D [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| 2,4-DB | ND | 0.048 | mg/kg wet | | | | | | | |
| 2,4-DB [2C] | ND | 0.048 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DG40931 - 3546** | | | | | | | | | | |
| Dalapon | ND | 0.046 | mg/kg wet | | | | | | | |
| Dalapon [2C] | ND | 0.046 | mg/kg wet | | | | | | | |
| Dicamba | ND | 0.009 | mg/kg wet | | | | | | | |
| Dicamba [2C] | ND | 0.009 | mg/kg wet | | | | | | | |
| Dichlorprop | ND | 0.047 | mg/kg wet | | | | | | | |
| Dichlorprop [2C] | ND | 0.047 | mg/kg wet | | | | | | | |
| Dinoseb | ND | 0.048 | mg/kg wet | | | | | | | |
| Dinoseb [2C] | ND | 0.048 | mg/kg wet | | | | | | | |
| MCPA | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPA [2C] | ND | 2.32 | mg/kg wet | | | | | | | |
| MCPP | ND | 2.35 | mg/kg wet | | | | | | | |
| MCPP [2C] | ND | 2.35 | mg/kg wet | | | | | | | |
| *Surrogate: DCAA* | *0.102* | | mg/kg wet | *0.2000* | | *51* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.116* | | mg/kg wet | *0.2000* | | *58* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 2,4,5-T | 0.010 | 0.010 | mg/kg wet | 0.01900 | | 50 | 40-140 | | | |
| 2,4,5-T [2C] | 0.011 | 0.010 | mg/kg wet | 0.01900 | | 58 | 40-140 | | | |
| 2,4,5-TP (Silvex) | 0.010 | 0.010 | mg/kg wet | 0.01900 | | 54 | 40-140 | | | |
| 2,4,5-TP (Silvex) [2C] | 0.011 | 0.010 | mg/kg wet | 0.01900 | | 60 | 40-140 | | | |
| 2,4-D | 0.107 | 0.047 | mg/kg wet | 0.1880 | | 57 | 40-140 | | | |
| 2,4-D [2C] | 0.108 | 0.047 | mg/kg wet | 0.1880 | | 57 | 40-140 | | | |
| 2,4-DB | 0.113 | 0.048 | mg/kg wet | 0.1900 | | 59 | 40-140 | | | |
| 2,4-DB [2C] | 0.122 | 0.048 | mg/kg wet | 0.1900 | | 64 | 40-140 | | | |
| Dalapon | 0.253 | 0.046 | mg/kg wet | 0.4550 | | 56 | 40-140 | | | |
| Dalapon [2C] | 0.310 | 0.046 | mg/kg wet | 0.4550 | | 68 | 40-140 | | | |
| Dicamba | 0.010 | 0.009 | mg/kg wet | 0.01880 | | 54 | 40-140 | | | |
| Dicamba [2C] | 0.013 | 0.009 | mg/kg wet | 0.01880 | | 68 | 40-140 | | | |
| Dichlorprop | 0.133 | 0.047 | mg/kg wet | 0.1880 | | 71 | 40-140 | | | |
| Dichlorprop [2C] | 0.132 | 0.047 | mg/kg wet | 0.1880 | | 70 | 40-140 | | | |
| Dinoseb | 0.019 | 0.048 | mg/kg wet | 0.09500 | | 20 | 10-100 | | | |
| Dinoseb [2C] | 0.022 | 0.048 | mg/kg wet | 0.09500 | | 24 | 10-100 | | | |
| MCPA | 11.1 | 2.32 | mg/kg wet | 18.60 | | 60 | 40-140 | | | |
| MCPA [2C] | 14.2 | 2.32 | mg/kg wet | 18.60 | | 76 | 40-140 | | | |
| MCPP | 11.6 | 2.35 | mg/kg wet | 18.80 | | 62 | 40-140 | | | |
| MCPP [2C] | 14.1 | 2.35 | mg/kg wet | 18.80 | | 75 | 40-140 | | | |
| *Surrogate: DCAA* | *0.110* | | mg/kg wet | *0.2000* | | *55* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.125* | | mg/kg wet | *0.2000* | | *63* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 2,4,5-T | 0.010 | 0.010 | mg/kg wet | 0.01900 | | 50 | 40-140 | 0 | 30 | |
| 2,4,5-T [2C] | 0.011 | 0.010 | mg/kg wet | 0.01900 | | 58 | 40-140 | 0 | 30 | |
| 2,4,5-TP (Silvex) | 0.011 | 0.010 | mg/kg wet | 0.01900 | | 56 | 40-140 | 4 | 30 | |
| 2,4,5-TP (Silvex) [2C] | 0.012 | 0.010 | mg/kg wet | 0.01900 | | 64 | 40-140 | 6 | 30 | |
| 2,4-D | 0.111 | 0.047 | mg/kg wet | 0.1880 | | 59 | 40-140 | 4 | 30 | |
| 2,4-D [2C] | 0.114 | 0.047 | mg/kg wet | 0.1880 | | 60 | 40-140 | 5 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8151A Chlorinated Herbicides** | | | | | | | | | | |
| **Batch DG40931 - 3546** | | | | | | | | | | |
| 2,4-DB | 0.119 | 0.048 | mg/kg wet | 0.1900 | | 63 | 40-140 | 6 | 30 | |
| 2,4-DB [2C] | 0.128 | 0.048 | mg/kg wet | 0.1900 | | 67 | 40-140 | 5 | 30 | |
| Dalapon | 0.250 | 0.046 | mg/kg wet | 0.4550 | | 55 | 40-140 | 1 | 30 | |
| Dalapon [2C] | 0.306 | 0.046 | mg/kg wet | 0.4550 | | 67 | 40-140 | 1 | 30 | |
| Dicamba | 0.010 | 0.009 | mg/kg wet | 0.01880 | | 54 | 40-140 | 0 | 30 | |
| Dicamba [2C] | 0.012 | 0.009 | mg/kg wet | 0.01880 | | 66 | 40-140 | 3 | 30 | |
| Dichlorprop | 0.142 | 0.047 | mg/kg wet | 0.1880 | | 76 | 40-140 | 7 | 30 | |
| Dichlorprop [2C] | 0.139 | 0.047 | mg/kg wet | 0.1880 | | 74 | 40-140 | 5 | 30 | |
| Dinoseb | 0.018 | 0.048 | mg/kg wet | 0.09500 | | 19 | 10-100 | 6 | 30 | |
| Dinoseb [2C] | 0.021 | 0.048 | mg/kg wet | 0.09500 | | 22 | 10-100 | 5 | 30 | |
| MCPA | 11.6 | 2.32 | mg/kg wet | 18.60 | | 62 | 40-140 | 4 | 30 | |
| MCPA [2C] | 15.2 | 2.32 | mg/kg wet | 18.60 | | 82 | 40-140 | 7 | 30 | |
| MCPP | 12.9 | 2.35 | mg/kg wet | 18.80 | | 69 | 40-140 | 11 | 30 | |
| MCPP [2C] | 15.1 | 2.35 | mg/kg wet | 18.80 | | 80 | 40-140 | 7 | 30 | |
| *Surrogate: DCAA* | *0.107* | | mg/kg wet | *0.2000* | | *54* | *30-150* | | | |
| *Surrogate: DCAA [2C]* | *0.120* | | mg/kg wet | *0.2000* | | *60* | *30-150* | | | |
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DG40339 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Decane (C10) | ND | 0.2 | mg/kg wet | | | | | | | |
| Docosane (C22) | ND | 0.2 | mg/kg wet | | | | | | | |
| Dodecane (C12) | ND | 0.2 | mg/kg wet | | | | | | | |
| Eicosane (C20) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexacosane (C26) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexadecane (C16) | ND | 0.2 | mg/kg wet | | | | | | | |
| Hexatriacontane (C36) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonadecane (C19) | ND | 0.2 | mg/kg wet | | | | | | | |
| Nonane (C9) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octacosane (C28) | ND | 0.2 | mg/kg wet | | | | | | | |
| Octadecane (C18) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetracosane (C24) | ND | 0.2 | mg/kg wet | | | | | | | |
| Tetradecane (C14) | ND | 0.2 | mg/kg wet | | | | | | | |
| Total Petroleum Hydrocarbons (C9-C36) | ND | 10.0 | mg/kg wet | | | | | | | |
| Triacontane (C30) | ND | 0.2 | mg/kg wet | | | | | | | |
| *Surrogate: O-Terphenyl* | *3.87* | | mg/kg wet | *5.000* | | *77* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| Decane (C10) | 1.7 | 0.2 | mg/kg wet | 2.500 | | 69 | 40-140 | | | |
| Docosane (C22) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | | | |
| Dodecane (C12) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Eicosane (C20) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | | | |
| Hexacosane (C26) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Hexadecane (C16) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | | | |
| Hexatriacontane (C36) | 2.4 | 0.2 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Nonadecane (C19) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8100M Total Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DG40339 - 3546** | | | | | | | | | | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 63 | 30-140 | | | |
| Octacosane (C28) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Octadecane (C18) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 71 | 40-140 | | | |
| Tetracosane (C24) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| Tetradecane (C14) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 72 | 40-140 | | | |
| Total Petroleum Hydrocarbons (C9-C36) | 26.8 | 10.0 | mg/kg wet | 35.00 | | 76 | 40-140 | | | |
| Triacontane (C30) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| *Surrogate: O-Terphenyl* | *3.56* | | mg/kg wet | *5.000* | | *71* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| Decane (C10) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 71 | 40-140 | 3 | 25 | |
| Docosane (C22) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 81 | 40-140 | 7 | 25 | |
| Dodecane (C12) | 1.8 | 0.2 | mg/kg wet | 2.500 | | 73 | 40-140 | 3 | 25 | |
| Eicosane (C20) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | 7 | 25 | |
| Hexacosane (C26) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 86 | 40-140 | 6 | 25 | |
| Hexadecane (C16) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 6 | 25 | |
| Hexatriacontane (C36) | 2.6 | 0.2 | mg/kg wet | 2.500 | | 102 | 40-140 | 6 | 25 | |
| Nonadecane (C19) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 82 | 40-140 | 7 | 25 | |
| Nonane (C9) | 1.6 | 0.2 | mg/kg wet | 2.500 | | 65 | 30-140 | 4 | 25 | |
| Octacosane (C28) | 2.1 | 0.2 | mg/kg wet | 2.500 | | 85 | 40-140 | 5 | 25 | |
| Octadecane (C18) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 76 | 40-140 | 7 | 25 | |
| Tetracosane (C24) | 2.0 | 0.2 | mg/kg wet | 2.500 | | 79 | 40-140 | 7 | 25 | |
| Tetradecane (C14) | 1.9 | 0.2 | mg/kg wet | 2.500 | | 75 | 40-140 | 5 | 25 | |
| Total Petroleum Hydrocarbons (C9-C36) | 28.1 | 10.0 | mg/kg wet | 35.00 | | 80 | 40-140 | 5 | 25 | |
| Triacontane (C30) | 2.2 | 0.2 | mg/kg wet | 2.500 | | 87 | 40-140 | 3 | 25 | |
| *Surrogate: O-Terphenyl* | *3.83* | | mg/kg wet | *5.000* | | *77* | *40-140* | | | |
| **Classical Chemistry** | | | | | | | | | | |
| **Batch DG40254 - General Preparation** | | | | | | | | | | |
| **Reference** | | | | | | | | | | |
| Flashpoint | 81 | | °F | 81.00 | | 100 | 97.9-102.1 | | | |
| **Batch DG40349 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Conductivity | ND | 5 | umhos/cm | | | | | | | |
| **LCS** | | | | | | | | | | |
| Conductivity | 1390 | | umhos/cm | 1410 | | 98 | 90-110 | | | |
| **Batch DG40541 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Reactive Cyanide | ND | 2.0 | mg/kg | | | | | | | |
| Reactive Sulfide | ND | 2.0 | mg/kg | | | | | | | |
| **LCS** | | | | | | | | | | |
| Reactive Cyanide | 4.2 | 2.0 | mg/kg | 100.3 | | 4 | 0.68-5.41 | | | |
| Reactive Sulfide | 2.2 | 2.0 | mg/kg | 10.00 | | 22 | 0-44 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

**Notes and Definitions**

| | |
|---|---|
| WL | Results obtained from a deionized water leach of the sample. |
| U | Analyte included in the analysis, but not detected |
| RRF | Analyte does not meet the Relative Response Factor (RRF) criteria in the calibration |
| Q | Calibration required quadratic regression (Q). |
| EL | Elevated Method Reporting Limits due to sample matrix (EL). |
| D+ | Relative percent difference for duplicate is outside of criteria (D+). |
| D | Diluted. |
| CD+ | Continuing Calibration %Diff/Drift is above control limit (CD+). |
| BT | Benzidine tailing factor >2. |
| B+ | Blank Spike recovery is above upper control limit (B+). |
| > | Greater than. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 3 ESS Laboratory Work Order: 24G0132

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24G0132
Date Received: 7/2/2024
Project Due Date: 7/10/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 2.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** (Yes) / No / NA
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? (Yes) / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? (Yes) / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered
    c. Low Level VOA vials frozen: Date: 7/2/24 Time: 16:32 By: Yes / No To Be Lab Filtered

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 568854 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 1 | 568855 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 1 | 568856 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 2 | 568857 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 568858 | Yes | N/A | Yes | 8 oz jar | NP | |
| 2 | 568859 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 568860 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 3 | 568861 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 3 | 568862 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 4 | 568863 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 568864 | Yes | N/A | Yes | 8 oz jar | NP | |
| 4 | 568865 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 568866 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 5 | 568867 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 5 | 568868 | Yes | N/A | Yes | VOA Vial | DI Water | |
| 6 | 568869 | Yes | N/A | Yes | 8 oz jar | NP | |
| 6 | 568870 | Yes | N/A | Yes | 8 oz jar | NP | |
| 6 | 568871 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 568872 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 7 | 568873 | Yes | N/A | Yes | VOA Vial | DI Water | |

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 24G0132
Date Received: 7/2/2024

| | | | | | | |
|---|---|---|---|---|---|---|
| 7 | 568874 | Yes | N/A | Yes | VOA Vial | DI Water |
| 8 | 568875 | Yes | N/A | Yes | 8 oz jar | NP |
| 8 | 568876 | Yes | N/A | Yes | 8 oz jar | NP |
| 8 | 568877 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 9 | 568878 | Yes | N/A | Yes | VOA Vial | MeOH |
| 9 | 568879 | Yes | N/A | Yes | VOA Vial | DI Water |
| 9 | 568880 | Yes | N/A | Yes | VOA Vial | DI Water |
| 10 | 568881 | Yes | N/A | Yes | 8 oz jar | NP |
| 10 | 568882 | Yes | N/A | Yes | 8 oz jar | NP |
| 10 | 568883 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 11 | 568884 | Yes | N/A | Yes | VOA Vial | MeOH |
| 11 | 568885 | Yes | N/A | Yes | VOA Vial | DI Water |
| 11 | 568886 | Yes | N/A | Yes | VOA Vial | DI Water |
| 12 | 568887 | Yes | N/A | Yes | 8 oz jar | NP |
| 12 | 568888 | Yes | N/A | Yes | 8 oz jar | NP |
| 12 | 568889 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 13 | 568890 | Yes | N/A | Yes | VOA Vial | MeOH |
| 13 | 568891 | Yes | N/A | Yes | VOA Vial | DI Water |
| 13 | 568892 | Yes | N/A | Yes | VOA Vial | DI Water |
| 14 | 568893 | Yes | N/A | Yes | 8 oz jar | NP |
| 14 | 568894 | Yes | N/A | Yes | 8 oz jar | NP |
| 14 | 568895 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 15 | 568896 | Yes | N/A | Yes | VOA Vial | MeOH |
| 15 | 568897 | Yes | N/A | Yes | VOA Vial | DI Water |
| 15 | 568898 | Yes | N/A | Yes | VOA Vial | DI Water |
| 16 | 568899 | Yes | N/A | Yes | 8 oz jar | NP |
| 16 | 568900 | Yes | N/A | Yes | 8 oz jar | NP |
| 16 | 568901 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 17 | 568902 | Yes | N/A | Yes | VOA Vial | MeOH |
| 17 | 568903 | Yes | N/A | Yes | VOA Vial | DI Water |
| 17 | 568904 | Yes | N/A | Yes | VOA Vial | DI Water |
| 18 | 568905 | Yes | N/A | Yes | 8 oz jar | NP |
| 18 | 568906 | Yes | N/A | Yes | 8 oz jar | NP |
| 18 | 568907 | Yes | N/A | Yes | 4 oz. Jar | NP |
| 19 | 568908 | Yes | N/A | Yes | VOA Vial | MeOH |
| 19 | 568909 | Yes | N/A | Yes | VOA Vial | DI Water |
| 19 | 568910 | Yes | N/A | Yes | VOA Vial | DI Water |
| 20 | 568911 | Yes | N/A | Yes | 8 oz jar | NP |
| 20 | 568912 | Yes | N/A | Yes | 8 oz jar | NP |
| 20 | 568913 | Yes | N/A | Yes | 4 oz. Jar | NP |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials MM

Are barcode labels on correct containers? (Yes) / No

Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA

Are all Hex Chrome stickers attached? Yes / No / NA

Are all QC stickers attached? Yes / No / NA

Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: [signature] Date & Time: 7/2/24 1745

Reviewed By: [signature] Date & Time: 7/2/24 1858

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 2460132

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Is this project for any of the following?: | ○ CT RCP ◉ MA MCP ○ RGP | |
| Reporting Limits | | |
| Electonic Deliverables | ☑ Data Checker ☑ Other (Please Specify →) | ☑ Excel EDD |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 3 |

| Contact Person | Address | | |
|---|---|---|---|
| Cassia Dal Bello | 31 Bellows Road | | |
| **City** | **State** | **Zip Code** | **PO #** |
| Raynham | MA | 02767 | |
| **Telephone Number** | **FAX Number** | **Email Address** | |
| 774-501-2176 | | cdalbello; jkitchen, hadam@cecinc.com | |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: RCRA8 Metals | PCB | TPH | SVOC - incl pyr | Pest - incl Tox | Herbicides | Reactivity | Conductivity | pH | Free Liquid | Flashpoint | VOC - high | VOC - low |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7/1/24 | 11:10 | Grab | Soil | C'-5 | | | | | | | | | | | | X | X |
| 2 | | 11:10 | Comp | Soil | C'-5 | X | X | X | X | X | X | X | X | X | X | X | | |
| 3 | | 11:25 | Grab | Soil | C'-3 | | | | | | | | | | | | X | X |
| 4 | | 11:25 | Comp | Soil | C'-3 | X | X | X | X | X | X | X | X | X | X | X | | |
| 5 | | 11:35 | Grab | Soil | C'-1 | | | | | | | | | | | | X | X |
| 6 | | 11:35 | Comp | Soil | C'-1 | X | X | X | X | X | X | X | X | X | X | X | | |
| 7 | | 11:50 | Grab | Soil | A'-1 | | | | | | | | | | | | X | X |
| 8 | | 11:50 | Comp | Soil | A'-1 | X | X | X | X | X | X | X | X | X | X | X | | |
| 9 | | 12:00 | Grab | Soil | A'-3 | | | | | | | | | | | | X | X |
| 10 | ↓ | 12:00 | Comp | Soil | A'-3 | X | X | X | X | X | X | X | X | X | X | X | | |
| **Container Type:** AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | | | | | | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | V | V |
| **Container Volume:** 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | | | | | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 7 | 7 |
| **Preservation Code:** 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 10 |
| **Number of Containers per Sample:** | | | | | | 1 | | | | | 1 | | | | | 1 | 1 | 2 |

**Laboratory Use Only**

Cooler Present: 4C5 ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 2.1 °C | Ca

**Sampled by :** CI

**Comments:** Please specify "Other" preservative and containers types in this space

Run TCLP if fails 20x

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 7/2/24 15:00 | 7/2/24 15:20 | 7/2/24 16:25 | 7/2/24 1625 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

# ESS Laboratory

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www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 2460132

| | | |
|---|---|---|
| **Turn Time** | 5 | Days |
| **Regulatory State** | Massachusetts | |
| **Is this project for any of the following?:** | ○ CT RCP ◉ MA MCP ○ RGP | |
| **Reporting Limits** | | |
| **Electonic Deliverables** | ☑ Data Checker ☑ Other (Please Specify →) | ☑ Excel EDD |

| **Company Name** | **Project #** | **Project Name** |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 3 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello, jkitchen, hadam@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: RCRA8 Metals | PCB | TPH | SVOC - incl pyr | Pest - incl Tox | Herbicides | Reactivity | Conductivity | pH | Free Liquid | Flashpoint | VOC - high | VOC - low | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 7/1/24 | 09:50 | Grab | Soil | E'-1 | | | | | | | | | | | | X | X | | | |
| 12 | | 09:50 | Comp | Soil | E'-1 | X | X | X | X | X | X | X | X | X | X | X | | | | | |
| 13 | | 10:00 | Grab | Soil | E'-3 | | | | | | | | | | | | X | X | | | |
| 14 | | 10:00 | Comp | Soil | E'-3 | X | X | X | X | X | X | X | X | X | X | X | | | | | |
| 15 | | 10:20 | Grab | Soil | E'-5 | | | | | | | | | | | | X | X | | | |
| 16 | | 10:20 | Comp | Soil | E'-5 | X | X | X | X | X | X | X | X | X | X | X | | | | | |
| 17 | | 10:35 | Grab | Soil | E'-7 | | | | | | | | | | | | X | X | | | |
| 18 | | 10:35 | Comp | Soil | E'-7 | X | X | X | X | X | X | X | X | X | X | X | | | | | |
| 19 | | 10:50 | Grab | Soil | C'-7 | | | | | | | | | | | | X | X | | | |
| 20 | ↓ | 10:50 | Comp | Soil | C'-7 | X | X | X | X | X | X | X | X | X | X | X | | | | | |
| **Container Type:** | | | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | | | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | AG | V | V | | | |
| **Container Volume:** | | | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 7 | 7 | | | |
| **Preservation Code:** | | | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 10 | | | |
| | | | | | **Number of Containers per Sample:** | 1 | | | | | 1 | | | | | 1 | 1 | 2 | | | |

**Laboratory Use Only**

Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 2.1 °C / ice

**Sampled by :** CI

**Comments:** Please specify "Other" preservative and containers types in this space

Run TCLP if fails 20x

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 7/2/24 15:00 | 7/2/24 15:20 | 7/2/24 16:20 | 7/2/24 1625 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24G0151**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 3:28 pm, Jul 11, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0151

## SAMPLE RECEIPT

The following samples were received on July 03, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24G0151-01 | C0 0-1 | Soil | 8082A |
| 24G0151-02 | A0 0-1 | Soil | 8082A |
| 24G0151-03 | B1 0-1 | Soil | 8082A |
| 24G0151-04 | C1 0-1 | Soil | 8082A |
| 24G0151-05 | B0-10E 2-3 | Soil | 8082A |
| 24G0151-06 | B0-10S 2-3 | Soil | 8082A |
| 24G0151-07 | B0-10W 2-3 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0151

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**
24G0151-02 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0151

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0151

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24G0151-01 through 24G0151-07**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: July 11, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C0 0-1
Date Sampled: 05/01/24 15:30
Percent Solids: 94
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0151
ESS Laboratory Sample ID: 24G0151-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/5/24 13:12

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 14:10 | --- | DG40505 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 14:10 | --- | DG40505 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 14:10 | --- | DG40505 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 14:10 | --- | DG40505 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 14:10 | --- | DG40505 |
| **Aroclor 1254 [2C]** | **3.4** (0.3) | --- | 8082A | --- | 5 | 07/09/24 16:30 | --- | DG40505 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 14:10 | --- | DG40505 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 14:10 | --- | DG40505 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 14:10 | --- | DG40505 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *110 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *89 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A0 0-1
Date Sampled: 05/01/24 12:55
Percent Solids: 95
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0151
ESS Laboratory Sample ID: 24G0151-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/5/24 13:12

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (10.4) | --- | 8082A | --- | 200 | 07/09/24 16:50 | --- | DG40505 |
| Aroclor 1221 | ND (10.4) | --- | 8082A | --- | 200 | 07/09/24 16:50 | --- | DG40505 |
| Aroclor 1232 | ND (10.4) | --- | 8082A | --- | 200 | 07/09/24 16:50 | --- | DG40505 |
| Aroclor 1242 | ND (10.4) | --- | 8082A | --- | 200 | 07/09/24 16:50 | --- | DG40505 |
| Aroclor 1248 | ND (10.4) | --- | 8082A | --- | 200 | 07/09/24 16:50 | --- | DG40505 |
| **Aroclor 1254** | **125** (10.4) | --- | 8082A | --- | 200 | 07/09/24 16:50 | --- | DG40505 |
| Aroclor 1260 | ND (10.4) | --- | 8082A | --- | 200 | 07/09/24 16:50 | --- | DG40505 |
| Aroclor 1262 | ND (10.4) | --- | 8082A | --- | 200 | 07/09/24 16:50 | --- | DG40505 |
| Aroclor 1268 | ND (10.4) | --- | 8082A | --- | 200 | 07/09/24 16:50 | --- | DG40505 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | % | SD | 30-150 |
| *Surrogate: Tetrachloro-m-xylene* | % | SD | 30-150 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B1 0-1
Date Sampled: 05/01/24 15:10
Percent Solids: 88
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0151
ESS Laboratory Sample ID: 24G0151-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/5/24 13:12

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 07/08/24 14:49 | --- | DG40505 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 07/08/24 14:49 | --- | DG40505 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 07/08/24 14:49 | --- | DG40505 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 07/08/24 14:49 | --- | DG40505 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 07/08/24 14:49 | --- | DG40505 |
| **Aroclor 1254 [2C]** | **2.5** (0.3) | --- | 8082A | --- | 5 | 07/09/24 17:09 | --- | DG40505 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 07/08/24 14:49 | --- | DG40505 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 07/08/24 14:49 | --- | DG40505 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 07/08/24 14:49 | --- | DG40505 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *90 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *93 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C1 0-1
Date Sampled: 05/02/24 09:50
Percent Solids: 93
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0151
ESS Laboratory Sample ID: 24G0151-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/5/24 13:12

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 18:31 | --- | DG40506 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 18:31 | --- | DG40506 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 18:31 | --- | DG40506 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 18:31 | --- | DG40506 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 18:31 | --- | DG40506 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 07/08/24 18:31 | --- | DG40506 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 18:31 | --- | DG40506 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 18:31 | --- | DG40506 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 18:31 | --- | DG40506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *66 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-10E 2-3
Date Sampled: 06/21/24 11:25
Percent Solids: 95
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0151
ESS Laboratory Sample ID: 24G0151-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/5/24 13:12

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 18:51 | --- | DG40506 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 18:51 | --- | DG40506 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 18:51 | --- | DG40506 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 18:51 | --- | DG40506 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 18:51 | --- | DG40506 |
| **Aroclor 1254 [2C]** | **0.8** (0.05) | --- | 8082A | --- | 1 | 07/08/24 18:51 | --- | DG40506 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 18:51 | --- | DG40506 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 18:51 | --- | DG40506 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 18:51 | --- | DG40506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *69 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-10S 2-3
Date Sampled: 06/21/24 09:15
Percent Solids: 98
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0151
ESS Laboratory Sample ID: 24G0151-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/5/24 13:12

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 19:10 | --- | DG40506 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 19:10 | --- | DG40506 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 19:10 | --- | DG40506 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 19:10 | --- | DG40506 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 19:10 | --- | DG40506 |
| **Aroclor 1254 [2C]** | **0.4** (0.05) | --- | 8082A | --- | 1 | 07/08/24 19:10 | --- | DG40506 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 19:10 | --- | DG40506 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 19:10 | --- | DG40506 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 19:10 | --- | DG40506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-10W 2-3
Date Sampled: 06/21/24 09:45
Percent Solids: 97
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0151
ESS Laboratory Sample ID: 24G0151-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/5/24 13:12

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 19:31 | --- | DG40506 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 19:31 | --- | DG40506 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 19:31 | --- | DG40506 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 19:31 | --- | DG40506 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 19:31 | --- | DG40506 |
| **Aroclor 1254 [2C]** | **0.5** (0.05) | --- | 8082A | --- | 1 | 07/08/24 19:31 | --- | DG40506 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 19:31 | --- | DG40506 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 19:31 | --- | DG40506 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/08/24 19:31 | --- | DG40506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *50 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *69 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0151

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DG40505 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.02 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.02 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0234* | | mg/kg wet | *0.02500* | | *94* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0218* | | mg/kg wet | *0.02500* | | *87* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0208* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0219* | | mg/kg wet | *0.02500* | | *88* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 91 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 86 | 40-140 | | | |
| Aroclor 1260 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 92 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 89 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0247* | | mg/kg wet | *0.02500* | | *99* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0229* | | mg/kg wet | *0.02500* | | *92* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0224* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0224* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 91 | 40-140 | 0.5 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 87 | 40-140 | 1 | 30 | |
| Aroclor 1260 | 0.5 | 0.02 | mg/kg wet | 0.5000 | | 93 | 40-140 | 1 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.02 | mg/kg wet | 0.5000 | | 90 | 40-140 | 0.5 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0242* | | mg/kg wet | *0.02500* | | *97* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0226* | | mg/kg wet | *0.02500* | | *90* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0221* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0221* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| **Batch DG40506 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0151

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DG40506 - 3540C** | | | | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0178* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0180* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0158* | | mg/kg wet | *0.02500* | | *63* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0165* | | mg/kg wet | *0.02500* | | *66* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 77 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 77 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 80 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0196* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0190* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0190* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 80 | 40-140 | 4 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 80 | 40-140 | 5 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | 5 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 85 | 40-140 | 5 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0201* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0151

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| SD | Surrogate recovery(ies) diluted below the MRL (SD). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0151

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24G0151
Date Received: 7/3/2024
Project Due Date: 7/11/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.5 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered — Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / (No)
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 569448 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 569449 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 569450 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 569451 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 569452 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 569453 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 569454 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials BS — (Yes) / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Date & Time: 7/3/24 16:26
Reviewed By: Taylor Date & Time: 7/3/24 1630

# CHAIN OF CUSTODY


ESS Laboratory
*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com


ESS Lab # 24 60151

Reporting Limits

Electonic Deliverables: ☑ Data Checker ☑ Excel EDD ☑ Other (Please Specify →)

| | | | |
|---|---|---|---|
| Company Name: Civil and Environmental Consultants | Turn Time: 5 Days | Project #: 332-344 | Project Name: MassCEC Phase III - Site 1 |
| Contact Person: Cassia Dal Bello | Regulatory State: Massachusetts | Address: 31 Bellows Road | |
| City: Raynham | State: MA | Zip Code: 02767 | PO # |
| Telephone Number: 774-501-2176 | FAX Number | Email Address: cdalbello; jkitchen, hadam@cecinc.com | |

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: PCB | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24G0152**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 3:42 pm, Jul 11, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0152

## SAMPLE RECEIPT

The following samples were received on July 03, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24G0152-01 | B0-10NW 0-1 | Soil | 8082A |
| 24G0152-02 | B0-15W 0-1 | Soil | 8082A |
| 24G0152-03 | B0-20W 0-1 | Soil | 8082A |
| 24G0152-04 | BO-10SW 0-1 | Soil | 8082A |
| 24G0152-05 | B0-10NE 0-1 | Soil | 8082A |
| 24G0152-06 | B0-15E 0-1 | Soil | 8082A |
| 24G0152-07 | B0-20E 0-1 | Soil | 8082A |
| 24G0152-08 | B0-10SE 0-1 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0152

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**

24G0152-01 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24G0152-02 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24G0152-03 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24G0152-04 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24G0152-05 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24G0152-06 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24G0152-07 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24G0152-08 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0152

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0152

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24G0152-01 through 24G0152-08**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: July 11, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-10NW 0-1
Date Sampled: 07/02/24 13:20
Percent Solids: 90
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0152
ESS Laboratory Sample ID: 24G0152-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/5/24 13:12

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (10.9) | --- | 8082A | --- | 200 | 07/09/24 18:12 | --- | DG40506 |
| Aroclor 1221 | ND (10.9) | --- | 8082A | --- | 200 | 07/09/24 18:12 | --- | DG40506 |
| Aroclor 1232 | ND (10.9) | --- | 8082A | --- | 200 | 07/09/24 18:12 | --- | DG40506 |
| Aroclor 1242 | ND (10.9) | --- | 8082A | --- | 200 | 07/09/24 18:12 | --- | DG40506 |
| Aroclor 1248 | ND (10.9) | --- | 8082A | --- | 200 | 07/09/24 18:12 | --- | DG40506 |
| **Aroclor 1254 [2C]** | **174** (10.9) | --- | 8082A | --- | 200 | 07/09/24 18:12 | --- | DG40506 |
| Aroclor 1260 | ND (10.9) | --- | 8082A | --- | 200 | 07/09/24 18:12 | --- | DG40506 |
| Aroclor 1262 | ND (10.9) | --- | 8082A | --- | 200 | 07/09/24 18:12 | --- | DG40506 |
| Aroclor 1268 | ND (10.9) | --- | 8082A | --- | 200 | 07/09/24 18:12 | --- | DG40506 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | % | SD | 30-150 |
| *Surrogate: Tetrachloro-m-xylene* | % | SD | 30-150 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-15W 0-1
Date Sampled: 07/02/24 13:40
Percent Solids: 93
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0152
ESS Laboratory Sample ID: 24G0152-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/5/24 13:12

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (26.5) | --- | 8082A | --- | 500 | 07/09/24 18:32 | --- | DG40506 |
| Aroclor 1221 | ND (26.5) | --- | 8082A | --- | 500 | 07/09/24 18:32 | --- | DG40506 |
| Aroclor 1232 | ND (26.5) | --- | 8082A | --- | 500 | 07/09/24 18:32 | --- | DG40506 |
| Aroclor 1242 | ND (26.5) | --- | 8082A | --- | 500 | 07/09/24 18:32 | --- | DG40506 |
| Aroclor 1248 | ND (26.5) | --- | 8082A | --- | 500 | 07/09/24 18:32 | --- | DG40506 |
| **Aroclor 1254** | **456** (26.5) | --- | 8082A | --- | 500 | 07/09/24 18:32 | --- | DG40506 |
| Aroclor 1260 | ND (26.5) | --- | 8082A | --- | 500 | 07/09/24 18:32 | --- | DG40506 |
| Aroclor 1262 | ND (26.5) | --- | 8082A | --- | 500 | 07/09/24 18:32 | --- | DG40506 |
| Aroclor 1268 | ND (26.5) | --- | 8082A | --- | 500 | 07/09/24 18:32 | --- | DG40506 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | % | SD | 30-150 |
| *Surrogate: Tetrachloro-m-xylene* | % | SD | 30-150 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-20W 0-1
Date Sampled: 07/02/24 13:30
Percent Solids: 88
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0152
ESS Laboratory Sample ID: 24G0152-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/5/24 13:12

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (5.6) | --- | 8082A | --- | 100 | 07/09/24 18:51 | --- | DG40506 |
| Aroclor 1221 | ND (5.6) | --- | 8082A | --- | 100 | 07/09/24 18:51 | --- | DG40506 |
| Aroclor 1232 | ND (5.6) | --- | 8082A | --- | 100 | 07/09/24 18:51 | --- | DG40506 |
| Aroclor 1242 | ND (5.6) | --- | 8082A | --- | 100 | 07/09/24 18:51 | --- | DG40506 |
| Aroclor 1248 | ND (5.6) | --- | 8082A | --- | 100 | 07/09/24 18:51 | --- | DG40506 |
| **Aroclor 1254 [2C]** | **81.8** (5.6) | --- | 8082A | --- | 100 | 07/09/24 18:51 | --- | DG40506 |
| Aroclor 1260 | ND (5.6) | --- | 8082A | --- | 100 | 07/09/24 18:51 | --- | DG40506 |
| Aroclor 1262 | ND (5.6) | --- | 8082A | --- | 100 | 07/09/24 18:51 | --- | DG40506 |
| Aroclor 1268 | ND (5.6) | --- | 8082A | --- | 100 | 07/09/24 18:51 | --- | DG40506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *%* | *SD* | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *%* | *SD* | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: BO-10SW 0-1
Date Sampled: 07/02/24 13:50
Percent Solids: 92
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0152
ESS Laboratory Sample ID: 24G0152-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/5/24 13:12

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (21.3) | --- | 8082A | --- | 400 | 07/09/24 19:11 | --- | DG40506 |
| Aroclor 1221 | ND (21.3) | --- | 8082A | --- | 400 | 07/09/24 19:11 | --- | DG40506 |
| Aroclor 1232 | ND (21.3) | --- | 8082A | --- | 400 | 07/09/24 19:11 | --- | DG40506 |
| Aroclor 1242 | ND (21.3) | --- | 8082A | --- | 400 | 07/09/24 19:11 | --- | DG40506 |
| Aroclor 1248 | ND (21.3) | --- | 8082A | --- | 400 | 07/09/24 19:11 | --- | DG40506 |
| **Aroclor 1254 [2C]** | **257** (21.3) | --- | 8082A | --- | 400 | 07/09/24 19:11 | --- | DG40506 |
| Aroclor 1260 | ND (21.3) | --- | 8082A | --- | 400 | 07/09/24 19:11 | --- | DG40506 |
| Aroclor 1262 | ND (21.3) | --- | 8082A | --- | 400 | 07/09/24 19:11 | --- | DG40506 |
| Aroclor 1268 | ND (21.3) | --- | 8082A | --- | 400 | 07/09/24 19:11 | --- | DG40506 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | % | SD | 30-150 |
| *Surrogate: Tetrachloro-m-xylene* | % | SD | 30-150 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-10NE 0-1
Date Sampled: 07/02/24 14:00
Percent Solids: 93
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0152
ESS Laboratory Sample ID: 24G0152-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/5/24 13:12

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (5.3) | --- | 8082A | --- | 100 | 07/09/24 19:31 | --- | DG40506 |
| Aroclor 1221 | ND (5.3) | --- | 8082A | --- | 100 | 07/09/24 19:31 | --- | DG40506 |
| Aroclor 1232 | ND (5.3) | --- | 8082A | --- | 100 | 07/09/24 19:31 | --- | DG40506 |
| Aroclor 1242 | ND (5.3) | --- | 8082A | --- | 100 | 07/09/24 19:31 | --- | DG40506 |
| Aroclor 1248 | ND (5.3) | --- | 8082A | --- | 100 | 07/09/24 19:31 | --- | DG40506 |
| **Aroclor 1254 [2C]** | **83.1** (5.3) | --- | 8082A | --- | 100 | 07/09/24 19:31 | --- | DG40506 |
| Aroclor 1260 | ND (5.3) | --- | 8082A | --- | 100 | 07/09/24 19:31 | --- | DG40506 |
| Aroclor 1262 | ND (5.3) | --- | 8082A | --- | 100 | 07/09/24 19:31 | --- | DG40506 |
| Aroclor 1268 | ND (5.3) | --- | 8082A | --- | 100 | 07/09/24 19:31 | --- | DG40506 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | % | SD | 30-150 |
| *Surrogate: Tetrachloro-m-xylene* | % | SD | 30-150 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-15E 0-1
Date Sampled: 07/02/24 14:20
Percent Solids: 96
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0152
ESS Laboratory Sample ID: 24G0152-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/5/24 13:12

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (10.4) | --- | 8082A | --- | 200 | 07/09/24 19:51 | --- | DG40506 |
| Aroclor 1221 | ND (10.4) | --- | 8082A | --- | 200 | 07/09/24 19:51 | --- | DG40506 |
| Aroclor 1232 | ND (10.4) | --- | 8082A | --- | 200 | 07/09/24 19:51 | --- | DG40506 |
| Aroclor 1242 | ND (10.4) | --- | 8082A | --- | 200 | 07/09/24 19:51 | --- | DG40506 |
| Aroclor 1248 | ND (10.4) | --- | 8082A | --- | 200 | 07/09/24 19:51 | --- | DG40506 |
| **Aroclor 1254 [2C]** | **136** (10.4) | --- | 8082A | --- | 200 | 07/09/24 19:51 | --- | DG40506 |
| Aroclor 1260 | ND (10.4) | --- | 8082A | --- | 200 | 07/09/24 19:51 | --- | DG40506 |
| Aroclor 1262 | ND (10.4) | --- | 8082A | --- | 200 | 07/09/24 19:51 | --- | DG40506 |
| Aroclor 1268 | ND (10.4) | --- | 8082A | --- | 200 | 07/09/24 19:51 | --- | DG40506 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *%* | *SD* | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *%* | *SD* | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-20E 0-1
Date Sampled: 07/02/24 14:10
Percent Solids: 92
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0152
ESS Laboratory Sample ID: 24G0152-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/5/24 13:12

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (5.4) | --- | 8082A | --- | 100 | 07/09/24 20:11 | --- | DG40506 |
| Aroclor 1221 | ND (5.4) | --- | 8082A | --- | 100 | 07/09/24 20:11 | --- | DG40506 |
| Aroclor 1232 | ND (5.4) | --- | 8082A | --- | 100 | 07/09/24 20:11 | --- | DG40506 |
| Aroclor 1242 | ND (5.4) | --- | 8082A | --- | 100 | 07/09/24 20:11 | --- | DG40506 |
| Aroclor 1248 | ND (5.4) | --- | 8082A | --- | 100 | 07/09/24 20:11 | --- | DG40506 |
| **Aroclor 1254 [2C]** | **67.6** (5.4) | --- | 8082A | --- | 100 | 07/09/24 20:11 | --- | DG40506 |
| Aroclor 1260 | ND (5.4) | --- | 8082A | --- | 100 | 07/09/24 20:11 | --- | DG40506 |
| Aroclor 1262 | ND (5.4) | --- | 8082A | --- | 100 | 07/09/24 20:11 | --- | DG40506 |
| Aroclor 1268 | ND (5.4) | --- | 8082A | --- | 100 | 07/09/24 20:11 | --- | DG40506 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | % | SD | 30-150 |
| *Surrogate: Tetrachloro-m-xylene* | % | SD | 30-150 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-10SE 0-1
Date Sampled: 07/02/24 14:30
Percent Solids: 89
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0152
ESS Laboratory Sample ID: 24G0152-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/5/24 13:12

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (2.8) | --- | 8082A | --- | 50 | 07/09/24 20:31 | --- | DG40506 |
| Aroclor 1221 | ND (2.8) | --- | 8082A | --- | 50 | 07/09/24 20:31 | --- | DG40506 |
| Aroclor 1232 | ND (2.8) | --- | 8082A | --- | 50 | 07/09/24 20:31 | --- | DG40506 |
| Aroclor 1242 | ND (2.8) | --- | 8082A | --- | 50 | 07/09/24 20:31 | --- | DG40506 |
| Aroclor 1248 | ND (2.8) | --- | 8082A | --- | 50 | 07/09/24 20:31 | --- | DG40506 |
| **Aroclor 1254 [2C]** | **54.3** (2.8) | --- | 8082A | --- | 50 | 07/09/24 20:31 | --- | DG40506 |
| Aroclor 1260 | ND (2.8) | --- | 8082A | --- | 50 | 07/09/24 20:31 | --- | DG40506 |
| Aroclor 1262 | ND (2.8) | --- | 8082A | --- | 50 | 07/09/24 20:31 | --- | DG40506 |
| Aroclor 1268 | ND (2.8) | --- | 8082A | --- | 50 | 07/09/24 20:31 | --- | DG40506 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | % | SD | 30-150 |
| *Surrogate: Tetrachloro-m-xylene* | % | SD | 30-150 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0152

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DG40506 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0178* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0180* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0158* | | mg/kg wet | *0.02500* | | *63* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0165* | | mg/kg wet | *0.02500* | | *66* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 77 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 77 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 80 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0195* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0196* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0190* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0190* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 80 | 40-140 | 4 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 80 | 40-140 | 5 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | 5 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 85 | 40-140 | 5 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0201* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0197* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0152

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| SD | Surrogate recovery(ies) diluted below the MRL (SD). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0152

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24G0152
Date Received: 7/3/2024
Project Due Date: 7/11/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.9 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered — Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / (No)
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 569455 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 569456 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 569457 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 569458 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 569459 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 569460 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 569461 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 8 | 569462 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials BB (Yes) / No

Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Date & Time: 7/3/24 16:28
Reviewed By: Date & Time: 7/3/24 1634

# CHAIN OF CUSTODY


ESS Laboratory
Division of Thielsch Engineering, Inc.
85 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com


ESS Lab # 24G0152

Turn Time: 5 Days
Regulatory State: Massachusetts
Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP
Reporting Limits:
Electonic Deliverables: ☑ Data Checker ☑ Excel EDD ☑ Other (Please Specify →)

Company Name: Civil and Environmental Consultants
Project #: 332-344
Project Name: MassCEC Phase III - Site 1
Contact Person: Cassia Dal Bello
Address: 31 Bellows Road
City: Raynham
State: MA
Zip Code: 02767
PO #:
Telephone Number: 774-501-2176
FAX Number:
Email Address: cdalbello; jkitchen, hadam@cecinc.com

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: PCB | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24G0453**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 2:22 pm, Jul 19, 2024

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0453

## SAMPLE RECEIPT

The following samples were received on July 12, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24G0453-01 | B0-10N15W 2-3 | Soil | 8082A |
| 24G0453-02 | B0-20W 2-3 | Soil | 8082A |
| 24G0453-03 | B0-10S15W 2-3 | Soil | 8082A |
| 24G0453-04 | B0-10N15E 2-3 | Soil | 8082A |
| 24G0453-05 | B0-20E 2-3 | Soil | 8082A |
| 24G0453-06 | B0-10S15E 2-3 | Soil | 8082A |
| 24G0453-07 | B-2 0-1 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0453

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**

24G0453-01 **Lower value is used due to matrix interferences (LC).**
Aroclor 1260

24G0453-01 **Percent difference between primary and confirmation results exceeds 40% (P).**
Aroclor 1260

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0453

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0453

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24G0453-01 through 24G0453-07**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: July 17, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-10N15W 2-3
Date Sampled: 07/02/24 13:20
Percent Solids: 95
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0453
ESS Laboratory Sample ID: 24G0453-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/12/24 16:25

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 22:43 | --- | DG41217 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 22:43 | --- | DG41217 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 22:43 | --- | DG41217 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 22:43 | --- | DG41217 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 22:43 | --- | DG41217 |
| **Aroclor 1254** | **0.2** (0.05) | --- | 8082A | --- | 1 | 07/15/24 22:43 | --- | DG41217 |
| **Aroclor 1260** | **P, LC 0.06** (0.05) | --- | 8082A | --- | 1 | 07/15/24 22:43 | --- | DG41217 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 22:43 | --- | DG41217 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 22:43 | --- | DG41217 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *52 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *67 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-20W 2-3
Date Sampled: 07/02/24 13:30
Percent Solids: 95
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0453
ESS Laboratory Sample ID: 24G0453-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/12/24 16:25

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 23:03 | --- | DG41217 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 23:03 | --- | DG41217 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 23:03 | --- | DG41217 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 23:03 | --- | DG41217 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 23:03 | --- | DG41217 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 07/15/24 23:03 | --- | DG41217 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 23:03 | --- | DG41217 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 23:03 | --- | DG41217 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 23:03 | --- | DG41217 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *53 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *61 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-10S15W 2-3
Date Sampled: 07/02/24 13:50
Percent Solids: 90
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0453
ESS Laboratory Sample ID: 24G0453-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/12/24 16:25

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 07/15/24 23:23 | --- | DG41217 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 07/15/24 23:23 | --- | DG41217 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 07/15/24 23:23 | --- | DG41217 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 07/15/24 23:23 | --- | DG41217 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 07/15/24 23:23 | --- | DG41217 |
| **Aroclor 1254** | **0.08** (0.06) | --- | 8082A | --- | 1 | 07/15/24 23:23 | --- | DG41217 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 07/15/24 23:23 | --- | DG41217 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 07/15/24 23:23 | --- | DG41217 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 07/15/24 23:23 | --- | DG41217 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *69 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-10N15E 2-3
Date Sampled: 07/02/24 14:00
Percent Solids: 92
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0453
ESS Laboratory Sample ID: 24G0453-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/12/24 16:25

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 23:42 | --- | DG41217 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 23:42 | --- | DG41217 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 23:42 | --- | DG41217 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 23:42 | --- | DG41217 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 23:42 | --- | DG41217 |
| **Aroclor 1254 [2C]** | **0.07** (0.05) | --- | 8082A | --- | 1 | 07/15/24 23:42 | --- | DG41217 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 23:42 | --- | DG41217 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 23:42 | --- | DG41217 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 23:42 | --- | DG41217 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *65 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *68 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-20E 2-3
Date Sampled: 07/02/24 14:10
Percent Solids: 93
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0453
ESS Laboratory Sample ID: 24G0453-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/12/24 16:25

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 0:02 | --- | DG41217 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 0:02 | --- | DG41217 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 0:02 | --- | DG41217 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 0:02 | --- | DG41217 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 0:02 | --- | DG41217 |
| **Aroclor 1254 [2C]** | **0.2** (0.05) | --- | 8082A | --- | 1 | 07/16/24 0:02 | --- | DG41217 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 0:02 | --- | DG41217 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 0:02 | --- | DG41217 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 0:02 | --- | DG41217 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *58 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *55 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-10S15E 2-3
Date Sampled: 07/02/24 14:30
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0453
ESS Laboratory Sample ID: 24G0453-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/12/24 16:25

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 0:22 | --- | DG41217 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 0:22 | --- | DG41217 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 0:22 | --- | DG41217 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 0:22 | --- | DG41217 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 0:22 | --- | DG41217 |
| **Aroclor 1254 [2C]** | **6.3** (0.6) | --- | 8082A | --- | 10 | 07/16/24 11:21 | --- | DG41217 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 0:22 | --- | DG41217 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 0:22 | --- | DG41217 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 0:22 | --- | DG41217 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *80 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *84 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B-2 0-1
Date Sampled: 05/01/24 14:55
Percent Solids: 90
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0453
ESS Laboratory Sample ID: 24G0453-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/12/24 16:25

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 0:42 | --- | DG41217 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 0:42 | --- | DG41217 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 0:42 | --- | DG41217 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 0:42 | --- | DG41217 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 0:42 | --- | DG41217 |
| Aroclor 1254 [2C] | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 0:42 | --- | DG41217 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 0:42 | --- | DG41217 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 0:42 | --- | DG41217 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 0:42 | --- | DG41217 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *70 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0453

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DG41217 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0174* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0174* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0161* | | mg/kg wet | *0.02500* | | *64* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0172* | | mg/kg wet | *0.02500* | | *69* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 74 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 76 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 77 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 80 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0190* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0189* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0185* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0188* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 76 | 40-140 | 2 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 77 | 40-140 | 2 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | 2 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | 2 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0188* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0188* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0183* | | mg/kg wet | *0.02500* | | *73* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0185* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0453

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| P | Percent difference between primary and confirmation results exceeds 40% (P). |
| LC | Lower value is used due to matrix interferences (LC). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0453

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24G0453
Date Received: 7/12/2024
Project Due Date: 7/19/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.4 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Cassia DalBello Date: 7/17/24 Time: By: SMD

Resolution:

Collection date for sample 7 is correct and Cassia submitted a revised COC to amend some sample ID's.

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 571769 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 571770 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 571771 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 571772 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 571773 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 571774 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 571775 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials TD Yes / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Date & Time: 7/12/24 1531
Reviewed By: Date & Time: 7/12/24 15:44

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24G0453

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Is this project for any of the following?: | ○ CT RCP ◉ MA MCP ○ RGP | |
| Reporting Limits | | |
| Electonic Deliverables | ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD | |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, hadam@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: PCB | |
|---|---|---|---|---|---|---|---|
| 1 | 7/2/24 | 13:20 | Grab | Soil | CDB ~~B0-10NW 2-3~~ B0-10N15W 2-3 | X | |
| 2 | 7/2/24 | 13:30 | Grab | Soil | B0-20W 2-3 | X | |
| 3 | 7/2/24 | 13:50 | Grab | Soil | CDB ~~B0-10SW 2-3~~ B0-10S15W 2-3 | X | |
| 4 | 7/2/24 | 14:00 | Grab | Soil | CDB ~~B0-10NE 2-3~~ B0-10N15E 2-3 | X | |
| 5 | 7/2/24 | 14:10 | Grab | Soil | B0-20E 2-3 | X | |
| 6 | 7/2/24 | 14:30 | Grab | Soil | CDB ~~B0-10SE 2-3~~ B0-10S15E 2-3 | X | |
| 7 | 5/1/24 | 14:55 | Grab | Soil | B-2 0-1 | X | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**Container Type:** AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — AG
**Container Volume:** 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10
**Preservation Code:** 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1
**Number of Containers per Sample:** 1

**Laboratory Use Only**
Cooler Present: yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.4 °C IR

**Sampled by :** CI & MKM

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| Hilary Cole 7/12/24 11:30 | SECURED FRIDGE | X [signature] 7-12-24 1220 | [signature] 7/12/24 15:18 |
| [signature] 7/12/24 15:18 | [signature] 1518 7/12/24 | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24G0454**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 12:42 pm, Jul 16, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0454

## SAMPLE RECEIPT

The following samples were received on July 12, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24G0454-01 | AA0 0-1 | Soil | 8082A |
| 24G0454-02 | AA-1 0-1 | Soil | 8082A |
| 24G0454-03 | A-1 0-1 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0454

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**
24G0454-03 **Surrogate recovery(ies) below lower control limit (S-).**
Tetrachloro-m-xylene (25% @ 30-150%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0454

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0454

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24G0454-01 through 24G0454-03**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? ***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.* | Yes (x) No ( )* |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: July 16, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA0 0-1
Date Sampled: 04/30/24 13:10
Percent Solids: 92
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0454
ESS Laboratory Sample ID: 24G0454-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/12/24 16:25

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 17:46 | --- | DG41217 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 17:46 | --- | DG41217 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 17:46 | --- | DG41217 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 17:46 | --- | DG41217 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 17:46 | --- | DG41217 |
| **Aroclor 1254 [2C]** | **2.0** (0.3) | --- | 8082A | --- | 5 | 07/16/24 11:01 | --- | DG41217 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 17:46 | --- | DG41217 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 17:46 | --- | DG41217 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 17:46 | --- | DG41217 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *62 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *61 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA-1 0-1
Date Sampled: 04/30/24 13:20
Percent Solids: 96
Initial Volume: 19.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0454
ESS Laboratory Sample ID: 24G0454-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/12/24 16:25

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 18:05 | --- | DG41217 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 18:05 | --- | DG41217 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 18:05 | --- | DG41217 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 18:05 | --- | DG41217 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 18:05 | --- | DG41217 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 18:05 | --- | DG41217 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 18:05 | --- | DG41217 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 18:05 | --- | DG41217 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/15/24 18:05 | --- | DG41217 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *62 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *60 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A-1 0-1
Date Sampled: 05/01/24 13:05
Percent Solids: 90
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0454
ESS Laboratory Sample ID: 24G0454-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/12/24 16:25

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 07/15/24 18:25 | --- | DG41217 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 07/15/24 18:25 | --- | DG41217 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 07/15/24 18:25 | --- | DG41217 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 07/15/24 18:25 | --- | DG41217 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 07/15/24 18:25 | --- | DG41217 |
| **Aroclor 1254** | **0.3** (0.06) | --- | 8082A | --- | 1 | 07/15/24 18:25 | --- | DG41217 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 07/15/24 18:25 | --- | DG41217 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 07/15/24 18:25 | --- | DG41217 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 07/15/24 18:25 | --- | DG41217 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *57 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *35 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0454

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DG41217 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0174* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0174* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0161* | | mg/kg wet | *0.02500* | | *64* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0172* | | mg/kg wet | *0.02500* | | *69* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 74 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 76 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 77 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 80 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0190* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0189* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0185* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0188* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 76 | 40-140 | 2 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 77 | 40-140 | 2 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | 2 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | 2 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0188* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0188* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0183* | | mg/kg wet | *0.02500* | | *73* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0185* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0454

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| S- | Surrogate recovery(ies) below lower control limit (S-). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0454

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24G0454
Date Received: 7/12/2024
Project Due Date: 7/16/2024
Days for Project: 2 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.4 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** (Yes) / No / NA
10. Were any analyses received outside of hold time? Yes (No)

11. Any Subcontracting needed? Yes (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? (Yes) / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 571766 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 571767 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 571768 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials TD (Yes) / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Taylor Dees Date & Time: 7/12/24 1530.
Reviewed By: Date & Time: 7/12/24 15:45

ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 24G0454

| | | |
|---|---|---|
| **Turn Time** | 2 | Days |
| **Regulatory State** | Massachusetts | |

**Is this project for any of the following?:** ○ CT RCP ◉ MA MCP ○ RGP

**Reporting Limits**

**Electonic Deliverables** ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| **Company Name** | **Project #** | **Project Name** |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| **Contact Person** | **Address** |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| **City** | **State** | **Zip Code** | **PO #** |
|---|---|---|---|
| Raynham | MA | 02767 | |

| **Telephone Number** | **FAX Number** | **Email Address** |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, hadam@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: PCB |
|---|---|---|---|---|---|---|
| 1 | 4/30/24 | 13:10 | Grab | Soil | AA0 0-1 | X |
| 2 | 4/30/24 | 13:20 | Grab | Soil | AA-1 0-1 | X |
| 3 | 5/1/24 | 13:05 | Grab | Soil | A-1 0-1 | X |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

**Container Type:** AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — AG

**Container Volume:** 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10

**Preservation Code:** 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1

**Number of Containers per Sample:** 1

**Laboratory Use Only**

Cooler Present: 4C5 ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.4 °C / C

**Sampled by :** DB & KD

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| Hilary Cd 7/12/24 11:30 | SECURED FRIDGE | Dac Bla 7-12-24 1220 | 7/12/24 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| 7/10/24 15:18 | 1518 7/12/24 | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24G0455**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 2:32 pm, Jul 19, 2024

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0455

## SAMPLE RECEIPT

The following samples were received on July 12, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24G0455-01 | FF-1 0-1 | Soil | 8082A |
| 24G0455-02 | FF-1 2-3 | Soil | 8082A |
| 24G0455-03 | FF-1 3-4 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0455

## PROJECT NARRATIVE

**No unusual observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0455

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0455

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24G0455-01 through 24G0455-03**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes (x) No ( )* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: July 17, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-1 0-1
Date Sampled: 06/20/24 11:20
Percent Solids: 99
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0455
ESS Laboratory Sample ID: 24G0455-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/12/24 16:25

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 1:02 | --- | DG41217 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 1:02 | --- | DG41217 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 1:02 | --- | DG41217 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 1:02 | --- | DG41217 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 1:02 | --- | DG41217 |
| Aroclor 1254 [2C] | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 1:02 | --- | DG41217 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 1:02 | --- | DG41217 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 1:02 | --- | DG41217 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 1:02 | --- | DG41217 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *72 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-1 2-3
Date Sampled: 06/20/24 11:20
Percent Solids: 94
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0455
ESS Laboratory Sample ID: 24G0455-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/12/24 16:25

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 1:21 | --- | DG41217 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 1:21 | --- | DG41217 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 1:21 | --- | DG41217 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 1:21 | --- | DG41217 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 1:21 | --- | DG41217 |
| **Aroclor 1254 [2C]** | **0.09** (0.05) | --- | 8082A | --- | 1 | 07/16/24 1:21 | --- | DG41217 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 1:21 | --- | DG41217 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 1:21 | --- | DG41217 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/16/24 1:21 | --- | DG41217 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *77 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *82 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: FF-1 3-4
Date Sampled: 06/20/24 11:20
Percent Solids: 86
Initial Volume: 19.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0455
ESS Laboratory Sample ID: 24G0455-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/12/24 16:25

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 1:41 | --- | DG41217 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 1:41 | --- | DG41217 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 1:41 | --- | DG41217 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 1:41 | --- | DG41217 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 1:41 | --- | DG41217 |
| **Aroclor 1254 [2C]** | **9.1** (0.6) | --- | 8082A | --- | 10 | 07/16/24 11:41 | --- | DG41217 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 1:41 | --- | DG41217 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 1:41 | --- | DG41217 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 07/16/24 1:41 | --- | DG41217 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *101 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *73 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0455

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DG41217 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0174* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0174* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0161* | | mg/kg wet | *0.02500* | | *64* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0172* | | mg/kg wet | *0.02500* | | *69* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 74 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 76 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 77 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 80 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0190* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0189* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0185* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0188* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 76 | 40-140 | 2 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 77 | 40-140 | 2 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 79 | 40-140 | 2 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | 2 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0188* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0188* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0183* | | mg/kg wet | *0.02500* | | *73* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0185* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0455

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0455

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24G0455
Date Received: 7/12/2024
Project Due Date: 7/19/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.4 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 571763 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 571764 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 571765 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials TO
Are barcode labels on correct containers? Yes / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Date & Time: 7/12/24 1529.
Reviewed By: Date & Time: 7/12/24 15:45

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 2460455.

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Reporting Limits | | |
| Electonic Deliverables | ☑ Data Checker ☑ Other (Please Specify →) | ☑ Excel EDD |

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, hadam@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: PCB |
|---|---|---|---|---|---|---|
| 1 | 6/20/24 | 11:20 | Grab | Soil | FF-1 0-1 | X |
| 2 | 6/20/24 | 11:20 | Grab | Soil | FF-1 2-3 | X |
| 3 | 6/20/24 | 11:20 | Grab | Soil | FF-1 3-4 | X |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

**Container Type:** AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — AG
**Container Volume:** 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10
**Preservation Code:** 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1
**Number of Containers per Sample:** 1

**Laboratory Use Only**
Cooler Present: 4c S ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.4 °C IR

**Sampled by :** DB

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| MaryKate Moreau 7/1/24 13:40 | Secured fridge | 7-12-24 1220 | 7/12/24 10:10 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| 7/12/24 15:18 | 7/1/2024 1518 | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24G0736**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 4:50 pm, Jul 26, 2024

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0736

## SAMPLE RECEIPT

The following samples were received on July 19, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24G0736-01 | A0.5 0-1 | Soil | 8082A |
| 24G0736-02 | AA0.5 0-1 | Soil | 8082A |
| 24G0736-03 | C0.5 0-1 | Soil | 8082A |
| 24G0736-04 | D0.5 0-1 | Soil | 8082A |
| 24G0736-05 | E0.5 0-1 | Soil | 8082A |
| 24G0736-06 | E0.5 Dup | Soil | 8082A |
| 24G0736-07 | B0-20N15E 0-1 | Soil | 8082A |
| 24G0736-08 | B0-20N15W 0-1 | Soil | 8082A |
| 24G0736-09 | B0-20N15W 1-2 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0736

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**

24G0736-01 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24G0736-05 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24G0736-06 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0736

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0736

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24G0736-01 through 24G0736-09**

Matrices: ( ) Ground Water/Surface Water (X) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (X) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (X) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (X) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (X) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (X) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (X) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (X) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (X)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (X) No ( )* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: July 26, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A0.5 0-1
Date Sampled: 07/17/24 09:50
Percent Solids: 75
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0736
ESS Laboratory Sample ID: 24G0736-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/22/24 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (6.6) | --- | 8082A | --- | 100 | 07/23/24 14:41 | --- | DG42206 |
| Aroclor 1221 | ND (6.6) | --- | 8082A | --- | 100 | 07/23/24 14:41 | --- | DG42206 |
| Aroclor 1232 | ND (6.6) | --- | 8082A | --- | 100 | 07/23/24 14:41 | --- | DG42206 |
| Aroclor 1242 | ND (6.6) | --- | 8082A | --- | 100 | 07/23/24 14:41 | --- | DG42206 |
| Aroclor 1248 | ND (6.6) | --- | 8082A | --- | 100 | 07/23/24 14:41 | --- | DG42206 |
| **Aroclor 1254 [2C]** | **68.0** (6.6) | --- | 8082A | --- | 100 | 07/23/24 14:41 | --- | DG42206 |
| Aroclor 1260 | ND (6.6) | --- | 8082A | --- | 100 | 07/23/24 14:41 | --- | DG42206 |
| Aroclor 1262 | ND (6.6) | --- | 8082A | --- | 100 | 07/23/24 14:41 | --- | DG42206 |
| Aroclor 1268 | ND (6.6) | --- | 8082A | --- | 100 | 07/23/24 14:41 | --- | DG42206 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *%* | *SD* | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *%* | *SD* | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: AA0.5 0-1
Date Sampled: 07/17/24 10:20
Percent Solids: 95
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0736
ESS Laboratory Sample ID: 24G0736-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/22/24 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:02 | --- | DG42206 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:02 | --- | DG42206 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:02 | --- | DG42206 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:02 | --- | DG42206 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:02 | --- | DG42206 |
| **Aroclor 1254 [2C]** | **7.1** (0.5) | --- | 8082A | --- | 10 | 07/23/24 15:01 | --- | DG42206 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:02 | --- | DG42206 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:02 | --- | DG42206 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:02 | --- | DG42206 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *70 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: C0.5 0-1
Date Sampled: 07/17/24 12:45
Percent Solids: 93
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0736
ESS Laboratory Sample ID: 24G0736-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/22/24 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:22 | --- | DG42206 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:22 | --- | DG42206 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:22 | --- | DG42206 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:22 | --- | DG42206 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:22 | --- | DG42206 |
| **Aroclor 1254 [2C]** | **9.3** (0.5) | --- | 8082A | --- | 10 | 07/23/24 15:21 | --- | DG42206 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:22 | --- | DG42206 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:22 | --- | DG42206 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:22 | --- | DG42206 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *77 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: D0.5 0-1
Date Sampled: 07/17/24 13:10
Percent Solids: 91
Initial Volume: 20.4g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0736
ESS Laboratory Sample ID: 24G0736-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/22/24 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:42 | --- | DG42206 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:42 | --- | DG42206 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:42 | --- | DG42206 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:42 | --- | DG42206 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:42 | --- | DG42206 |
| **Aroclor 1254 [2C]** | **0.8** (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:42 | --- | DG42206 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:42 | --- | DG42206 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:42 | --- | DG42206 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 12:42 | --- | DG42206 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *71 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E0.5 0-1
Date Sampled: 07/17/24 13:50
Percent Solids: 91
Initial Volume: 19.7g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0736
ESS Laboratory Sample ID: 24G0736-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/22/24 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (1.1) | --- | 8082A | --- | 20 | 07/23/24 15:41 | --- | DG42206 |
| Aroclor 1221 | ND (1.1) | --- | 8082A | --- | 20 | 07/23/24 15:41 | --- | DG42206 |
| Aroclor 1232 | ND (1.1) | --- | 8082A | --- | 20 | 07/23/24 15:41 | --- | DG42206 |
| Aroclor 1242 | ND (1.1) | --- | 8082A | --- | 20 | 07/23/24 15:41 | --- | DG42206 |
| Aroclor 1248 | ND (1.1) | --- | 8082A | --- | 20 | 07/23/24 15:41 | --- | DG42206 |
| **Aroclor 1254 [2C]** | **19.9** (1.1) | --- | 8082A | --- | 20 | 07/23/24 15:41 | --- | DG42206 |
| Aroclor 1260 | ND (1.1) | --- | 8082A | --- | 20 | 07/23/24 15:41 | --- | DG42206 |
| Aroclor 1262 | ND (1.1) | --- | 8082A | --- | 20 | 07/23/24 15:41 | --- | DG42206 |
| Aroclor 1268 | ND (1.1) | --- | 8082A | --- | 20 | 07/23/24 15:41 | --- | DG42206 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *%* | *SD* | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *%* | *SD* | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: E0.5 Dup
Date Sampled: 07/17/24 13:50
Percent Solids: 90
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0736
ESS Laboratory Sample ID: 24G0736-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/22/24 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (1.1) | --- | 8082A | --- | 20 | 07/23/24 16:01 | --- | DG42206 |
| Aroclor 1221 | ND (1.1) | --- | 8082A | --- | 20 | 07/23/24 16:01 | --- | DG42206 |
| Aroclor 1232 | ND (1.1) | --- | 8082A | --- | 20 | 07/23/24 16:01 | --- | DG42206 |
| Aroclor 1242 | ND (1.1) | --- | 8082A | --- | 20 | 07/23/24 16:01 | --- | DG42206 |
| Aroclor 1248 | ND (1.1) | --- | 8082A | --- | 20 | 07/23/24 16:01 | --- | DG42206 |
| **Aroclor 1254 [2C]** | **12.4** (1.1) | --- | 8082A | --- | 20 | 07/23/24 16:01 | --- | DG42206 |
| Aroclor 1260 | ND (1.1) | --- | 8082A | --- | 20 | 07/23/24 16:01 | --- | DG42206 |
| Aroclor 1262 | ND (1.1) | --- | 8082A | --- | 20 | 07/23/24 16:01 | --- | DG42206 |
| Aroclor 1268 | ND (1.1) | --- | 8082A | --- | 20 | 07/23/24 16:01 | --- | DG42206 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | % | SD | 30-150 |
| *Surrogate: Tetrachloro-m-xylene* | % | SD | 30-150 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-20N15E 0-1
Date Sampled: 07/17/24 12:40
Percent Solids: 97
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0736
ESS Laboratory Sample ID: 24G0736-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/22/24 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 13:42 | --- | DG42206 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 13:42 | --- | DG42206 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 13:42 | --- | DG42206 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 13:42 | --- | DG42206 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 13:42 | --- | DG42206 |
| **Aroclor 1254 [2C]** | **3.1** (0.3) | --- | 8082A | --- | 5 | 07/23/24 16:20 | --- | DG42206 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 13:42 | --- | DG42206 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 13:42 | --- | DG42206 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 13:42 | --- | DG42206 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *61 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *64 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-20N15W 0-1
Date Sampled: 07/17/24 14:20
Percent Solids: 96
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0736
ESS Laboratory Sample ID: 24G0736-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/22/24 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 14:01 | --- | DG42206 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 14:01 | --- | DG42206 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 14:01 | --- | DG42206 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 14:01 | --- | DG42206 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 14:01 | --- | DG42206 |
| **Aroclor 1254 [2C]** | **0.5** (0.05) | --- | 8082A | --- | 1 | 07/23/24 14:01 | --- | DG42206 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 14:01 | --- | DG42206 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 14:01 | --- | DG42206 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 14:01 | --- | DG42206 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *69 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-20N15W 1-2
Date Sampled: 07/17/24 14:25
Percent Solids: 95
Initial Volume: 19.6g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0736
ESS Laboratory Sample ID: 24G0736-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/22/24 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 14:21 | --- | DG42206 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 14:21 | --- | DG42206 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 14:21 | --- | DG42206 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 14:21 | --- | DG42206 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 14:21 | --- | DG42206 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 07/23/24 14:21 | --- | DG42206 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 14:21 | --- | DG42206 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 14:21 | --- | DG42206 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 14:21 | --- | DG42206 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *68 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0736

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DG42206 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0173* | | mg/kg wet | *0.02500* | | *69* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0187* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 71 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 73 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 74 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 78 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0179* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 71 | 40-140 | 0.8 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 74 | 40-140 | 0.6 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 74 | 40-140 | 0.1 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 77 | 40-140 | 0.3 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0173* | | mg/kg wet | *0.02500* | | *69* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0180* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0183* | | mg/kg wet | *0.02500* | | *73* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0736

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| SD | Surrogate recovery(ies) diluted below the MRL (SD). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0736

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24G0736
Date Received: 7/19/2024
Project Due Date: 7/26/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 5.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 574202 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 574203 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 574204 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 574205 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 574206 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 574207 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 574208 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 8 | 574209 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 9 | 574210 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials: MR (Yes) / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: [signature] Date & Time: 7/19/24 1541
Reviewed

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

By: [signature] Date & Time: 7/19/24 1023.

ESS Project ID: 24G0736

Date Received: 7/19/2024

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24G0736

| | | | |
|---|---|---|---|
| Turn Time | 5 | Days | Reporting Limits |
| Regulatory State | Massachusetts | | |
| Is this project for any of the following?: | ○ CT RCP | ◉ MA MCP | ○ RGP |
| Electonic Deliverables | ☑ Data Checker | ☑ Excel | ☑ Other (Please Specify →) EDD |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello, ikitchen, hadam@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: PCB |
|---|---|---|---|---|---|---|
| 1 | 7/17/2024 | 09:50 | Grab | Soil | A0.5 0-1 | X |
| 2 | 7/17/2024 | 10:20 | Grab | Soil | AA0.5 0-1 | X |
| 3 | 7/17/2024 | 12:45 | Grab | Soil | C0.5 0-1 | X |
| 4 | 7/17/2024 | 13:10 | Grab | Soil | D0.5 0-1 | X |
| 5 | 7/17/2024 | 13:50 | Grab | Soil | E0.5 0-1 | X |
| 6 | 7/17/2024 | 13:50 | Grab | Soil | E0.5 dup | X |
| 7 | 7/17/2024 | 12:40 | Grab | Soil | B0-20N15E 0-1 | X |
| 8 | 7/17/2024 | 14:20 | Grab | Soil | B0-20N15W 0-1 | X |
| 9 | 7/17/2024 | 14:25 | Grab | Soil | B0-20N15W 1-2 | X |
| | | | | | | |

| | | |
|---|---|---|
| **Container Type:** | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | AG |
| **Container Volume:** | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | 10 |
| **Preservation Code:** | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | 1 |
| | **Number of Containers per Sample:** | 1 |

**Laboratory Use Only**

Cooler Present: 4C 5 ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 5.1 °C / C

Sampled by : ~~DB~~ CI

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 7/17/24 19:30 | Secured Fridge | 7/19/24 12:00 | 7/19/24 12:00 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| 7/19/24 15:08 | 7/19/24 1509 | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24G0737**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 4:51 pm, Jul 26, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0737

## SAMPLE RECEIPT

The following samples were received on July 19, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24G0737-01 | A0-10W 0-1 | Soil | 8082A |
| 24G0737-02 | A0-10W 2-3 | Soil | 8082A |
| 24G0737-03 | A0-20N10W 0-1 | Soil | 8082A |
| 24G0737-04 | A0-20N10W 1-2 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0737

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**
24G0737-01 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0737

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0737

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24G0737-01 through 24G0737-04**

Matrices: ( ) Ground Water/Surface Water (X) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (X) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (X) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (X) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (X) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (X) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (X) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (X) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (X)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (X) No ( )* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: July 26, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A0-10W 0-1
Date Sampled: 07/17/24 15:45
Percent Solids: 97
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0737
ESS Laboratory Sample ID: 24G0737-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/22/24 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (1.0) | --- | 8082A | --- | 20 | 07/24/24 12:10 | --- | DG42206 |
| Aroclor 1221 | ND (1.0) | --- | 8082A | --- | 20 | 07/24/24 12:10 | --- | DG42206 |
| Aroclor 1232 | ND (1.0) | --- | 8082A | --- | 20 | 07/24/24 12:10 | --- | DG42206 |
| Aroclor 1242 | ND (1.0) | --- | 8082A | --- | 20 | 07/24/24 12:10 | --- | DG42206 |
| Aroclor 1248 | ND (1.0) | --- | 8082A | --- | 20 | 07/24/24 12:10 | --- | DG42206 |
| **Aroclor 1254 [2C]** | **15.7** (1.0) | --- | 8082A | --- | 20 | 07/24/24 12:10 | --- | DG42206 |
| Aroclor 1260 | ND (1.0) | --- | 8082A | --- | 20 | 07/24/24 12:10 | --- | DG42206 |
| Aroclor 1262 | ND (1.0) | --- | 8082A | --- | 20 | 07/24/24 12:10 | --- | DG42206 |
| Aroclor 1268 | ND (1.0) | --- | 8082A | --- | 20 | 07/24/24 12:10 | --- | DG42206 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *%* | *SD* | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *%* | *SD* | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A0-10W 2-3
Date Sampled: 07/17/24 16:00
Percent Solids: 95
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0737
ESS Laboratory Sample ID: 24G0737-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/22/24 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 19:39 | --- | DG42206 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 19:39 | --- | DG42206 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 19:39 | --- | DG42206 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 19:39 | --- | DG42206 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 19:39 | --- | DG42206 |
| **Aroclor 1254 [2C]** | **0.4** (0.05) | --- | 8082A | --- | 1 | 07/23/24 19:39 | --- | DG42206 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 19:39 | --- | DG42206 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 19:39 | --- | DG42206 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 19:39 | --- | DG42206 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *72 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A0-20N10W 0-1
Date Sampled: 07/17/24 13:45
Percent Solids: 94
Initial Volume: 20g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0737
ESS Laboratory Sample ID: 24G0737-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/22/24 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 19:59 | --- | DG42206 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 19:59 | --- | DG42206 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 19:59 | --- | DG42206 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 19:59 | --- | DG42206 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 19:59 | --- | DG42206 |
| **Aroclor 1254 [2C]** | **0.3** (0.05) | --- | 8082A | --- | 1 | 07/23/24 19:59 | --- | DG42206 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 19:59 | --- | DG42206 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 19:59 | --- | DG42206 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 19:59 | --- | DG42206 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *66 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *67 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A0-20N10W 1-2
Date Sampled: 07/17/24 14:05
Percent Solids: 95
Initial Volume: 19.8g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0737
ESS Laboratory Sample ID: 24G0737-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/22/24 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 20:18 | --- | DG42206 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 20:18 | --- | DG42206 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 20:18 | --- | DG42206 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 20:18 | --- | DG42206 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 20:18 | --- | DG42206 |
| Aroclor 1254 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 20:18 | --- | DG42206 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 20:18 | --- | DG42206 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 20:18 | --- | DG42206 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 20:18 | --- | DG42206 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *72 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0737

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DG42206 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0173* | | mg/kg wet | *0.02500* | | *69* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0187* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 71 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 73 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 74 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 78 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0179* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 71 | 40-140 | 0.8 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 74 | 40-140 | 0.6 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 74 | 40-140 | 0.1 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 77 | 40-140 | 0.3 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0173* | | mg/kg wet | *0.02500* | | *69* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0180* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0183* | | mg/kg wet | *0.02500* | | *73* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0737

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| SD | Surrogate recovery(ies) diluted below the MRL (SD). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0737

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24G0737
Date Received: 7/19/2024
Project Due Date: 7/26/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 5.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No (NA)
10. Were any analyses received outside of hold time? Yes (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 573999 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 574000 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 574001 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 574002 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials MC (Yes) / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Date & Time: 7/19/24 16 1541
Reviewed By: Date & Time: 7/19/24 1625.

ESS Laboratory
*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 2460737

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Reporting Limits | | |

Is this project for any of the following?: ○ CT RCP ◉ MA MCP ○ RGP

Electonic Deliverables: ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello; jkitchen, hadam@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: PCB |
|---|---|---|---|---|---|---|
| 1 | 7/17/2024 | 15:45 | Grab | Soil | A0-10W 0-1 | X |
| 2 | 7/17/2024 | 16:00 | Grab | Soil | A0-10W 2-3 | X |
| 3 | 7/17/2024 | 13:45 | Grab | Soil | A0-20N10W 0-1 | X |
| 4 | 7/17/2024 | 14:05 | Grab | Soil | A0-20N10W 1-2 | X |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| | | |
|---|---|---|
| Container Type: | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | AG |
| Container Volume: | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | 10 |
| Preservation Code: | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | 1 |
| | Number of Containers per Sample: | 1 |

**Laboratory Use Only**

Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 5.1 °C IR

Sampled by: ~~DB~~ CI

Comments: Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 7/17/24 18:30 | Secured Fridge | X 7/19/24 12:00 | 7/18/24 12:45 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| 7/18/24 15:25 | 7/19/24 1509 | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24G0738**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 4:54 pm, Jul 26, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0738

## SAMPLE RECEIPT

The following samples were received on July 19, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24G0738-01 | L0 0-1 | Soil | 8082A |
| 24G0738-02 | N0 0-1 | Soil | 8082A |
| 24G0738-03 | M0 0-1 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0738

## PROJECT NARRATIVE

**No unusual observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0738

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0738

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24G0738-01 through 24G0738-03**

Matrices: ( ) Ground Water/Surface Water (X) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (X) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (X) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (X) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (X) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (X) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (X) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (X) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes (X) No ( )* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (X) No ( )* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: July 26, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: L0 0-1
Date Sampled: 07/17/24 16:50
Percent Solids: 88
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0738
ESS Laboratory Sample ID: 24G0738-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/22/24 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 07/23/24 20:38 | --- | DG42206 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 07/23/24 20:38 | --- | DG42206 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 07/23/24 20:38 | --- | DG42206 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 07/23/24 20:38 | --- | DG42206 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 07/23/24 20:38 | --- | DG42206 |
| **Aroclor 1254 [2C]** | **2.9** (0.3) | --- | 8082A | --- | 5 | 07/24/24 12:30 | --- | DG42206 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 07/23/24 20:38 | --- | DG42206 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 07/23/24 20:38 | --- | DG42206 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 07/23/24 20:38 | --- | DG42206 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *67 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: N0 0-1
Date Sampled: 07/17/24 17:00
Percent Solids: 91
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0738
ESS Laboratory Sample ID: 24G0738-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/22/24 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 20:58 | --- | DG42206 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 20:58 | --- | DG42206 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 20:58 | --- | DG42206 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 20:58 | --- | DG42206 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 20:58 | --- | DG42206 |
| **Aroclor 1254 [2C]** | **0.09** (0.05) | --- | 8082A | --- | 1 | 07/23/24 20:58 | --- | DG42206 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 20:58 | --- | DG42206 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 20:58 | --- | DG42206 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 20:58 | --- | DG42206 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *68 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: M0 0-1
Date Sampled: 07/17/24 17:15
Percent Solids: 92
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G0738
ESS Laboratory Sample ID: 24G0738-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 7/22/24 11:55

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 21:18 | --- | DG42206 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 21:18 | --- | DG42206 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 21:18 | --- | DG42206 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 21:18 | --- | DG42206 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 21:18 | --- | DG42206 |
| **Aroclor 1254 [2C]** | **0.1** (0.05) | --- | 8082A | --- | 1 | 07/23/24 21:18 | --- | DG42206 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 21:18 | --- | DG42206 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 21:18 | --- | DG42206 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 07/23/24 21:18 | --- | DG42206 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *64 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0738

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DG42206 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0173* | | mg/kg wet | *0.02500* | | *69* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0187* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 71 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 73 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 74 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 78 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0179* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 71 | 40-140 | 0.8 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 74 | 40-140 | 0.6 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 74 | 40-140 | 0.1 | 30 | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 77 | 40-140 | 0.3 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0175* | | mg/kg wet | *0.02500* | | *70* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0173* | | mg/kg wet | *0.02500* | | *69* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0180* | | mg/kg wet | *0.02500* | | *72* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0183* | | mg/kg wet | *0.02500* | | *73* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0738

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G0738

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24G0738
Date Received: 7/19/2024
Project Due Date: 7/26/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 5.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

Sample #2 container - 1715 Sample 3 container = 1700

Logged in and reported per COC times--SBL 7/26/24

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 574008 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 574009 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 574010 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials: MM
Are barcode labels on correct containers? (Yes) / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Date & Time: 7/19/24 1541
Reviewed By: Date & Time: 7/19/24 1625

ESS Laboratory
*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 24607 38

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |
| Is this project for any of the following?: | ○ CT RCP ◉ MA MCP ○ RGP | |
| Reporting Limits | | |
| Electonic Deliverables | ☑ Data Checker ☑ Excel ☑ Other (Please Specify →) EDD | |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |

| Contact Person | Address |
|---|---|
| Cassia Dal Bello | 31 Bellows Road |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Raynham | MA | 02767 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| 774-501-2176 | | cdalbello, jkitchen, hadam@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: PCB | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7/17/2024 | 16:50 | Grab | Soil | L0 0-1 | X | | | | | | | | | | | | | | | |
| 2 | 7/17/2024 | 17:00 | Grab | Soil | N0 0-1 | X | | | | | | | | | | | | | | | |
| 3 | 7/17/2024 | 17:15 | Grab | Soil | M0 0-1 | X | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
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**Container Type:** AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — AG
**Container Volume:** 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10
**Preservation Code:** 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1
**Number of Containers per Sample:** 1

**Laboratory Use Only**
Cooler Present: 4C S ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 5.1 °C IR

Sampled by : CI and BB

Comments: Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 7/17/24 18:30 | 7/18/24 14:00 | 7/18/24 15:00 | 7/19/24 1509 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24G1155**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 8:04 pm, Aug 07, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G1155

## SAMPLE RECEIPT

The following samples were received on July 31, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24G1155-01 | B0-15N15W 0-1 | Soil | 8082A |
| 24G1155-02 | B0-15N15E 0-1 | Soil | 8082A |
| 24G1155-03 | A0-5W 0-1 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G1155

## PROJECT NARRATIVE

**8082A Polychlorinated Biphenyls (PCB)**

24G1155-01 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

24G1155-02 **Surrogate recovery(ies) diluted below the MRL (SD).**
Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G1155

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G1155

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24G1155-01 through 24G1155-03**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | ( x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? ***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.* | Yes (x) No ( )* |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: August 07, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-15N15W 0-1
Date Sampled: 07/17/24 14:45
Percent Solids: 97
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G1155
ESS Laboratory Sample ID: 24G1155-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 8/1/24 11:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (5.1) | --- | 8082A | --- | 100 | 08/05/24 19:13 | --- | DH40103 |
| Aroclor 1221 | ND (5.1) | --- | 8082A | --- | 100 | 08/05/24 19:13 | --- | DH40103 |
| Aroclor 1232 | ND (5.1) | --- | 8082A | --- | 100 | 08/05/24 19:13 | --- | DH40103 |
| Aroclor 1242 | ND (5.1) | --- | 8082A | --- | 100 | 08/05/24 19:13 | --- | DH40103 |
| Aroclor 1248 | ND (5.1) | --- | 8082A | --- | 100 | 08/05/24 19:13 | --- | DH40103 |
| **Aroclor 1254 [2C]** | **72.2** (5.1) | --- | 8082A | --- | 100 | 08/05/24 19:13 | --- | DH40103 |
| Aroclor 1260 | ND (5.1) | --- | 8082A | --- | 100 | 08/05/24 19:13 | --- | DH40103 |
| Aroclor 1262 | ND (5.1) | --- | 8082A | --- | 100 | 08/05/24 19:13 | --- | DH40103 |
| Aroclor 1268 | ND (5.1) | --- | 8082A | --- | 100 | 08/05/24 19:13 | --- | DH40103 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *%* | *SD* | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *%* | *SD* | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: B0-15N15E 0-1
Date Sampled: 07/17/24 12:30
Percent Solids: 96
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G1155
ESS Laboratory Sample ID: 24G1155-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 8/1/24 11:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (5.1) | --- | 8082A | --- | 100 | 08/05/24 19:32 | --- | DH40103 |
| Aroclor 1221 | ND (5.1) | --- | 8082A | --- | 100 | 08/05/24 19:32 | --- | DH40103 |
| Aroclor 1232 | ND (5.1) | --- | 8082A | --- | 100 | 08/05/24 19:32 | --- | DH40103 |
| Aroclor 1242 | ND (5.1) | --- | 8082A | --- | 100 | 08/05/24 19:32 | --- | DH40103 |
| Aroclor 1248 | ND (5.1) | --- | 8082A | --- | 100 | 08/05/24 19:32 | --- | DH40103 |
| **Aroclor 1254 [2C]** | **49.9** (5.1) | --- | 8082A | --- | 100 | 08/05/24 19:32 | --- | DH40103 |
| Aroclor 1260 | ND (5.1) | --- | 8082A | --- | 100 | 08/05/24 19:32 | --- | DH40103 |
| Aroclor 1262 | ND (5.1) | --- | 8082A | --- | 100 | 08/05/24 19:32 | --- | DH40103 |
| Aroclor 1268 | ND (5.1) | --- | 8082A | --- | 100 | 08/05/24 19:32 | --- | DH40103 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *%* | *SD* | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *%* | *SD* | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: A0-5W 0-1
Date Sampled: 07/17/24 15:20
Percent Solids: 99
Initial Volume: 20.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24G1155
ESS Laboratory Sample ID: 24G1155-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 8/1/24 11:15

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.05) | --- | 8082A | --- | 1 | 08/02/24 17:02 | --- | DH40103 |
| Aroclor 1221 | ND (0.05) | --- | 8082A | --- | 1 | 08/02/24 17:02 | --- | DH40103 |
| Aroclor 1232 | ND (0.05) | --- | 8082A | --- | 1 | 08/02/24 17:02 | --- | DH40103 |
| Aroclor 1242 | ND (0.05) | --- | 8082A | --- | 1 | 08/02/24 17:02 | --- | DH40103 |
| Aroclor 1248 | ND (0.05) | --- | 8082A | --- | 1 | 08/02/24 17:02 | --- | DH40103 |
| **Aroclor 1254 [2C]** | **4.5** (0.5) | --- | 8082A | --- | 10 | 08/05/24 19:52 | --- | DH40103 |
| Aroclor 1260 | ND (0.05) | --- | 8082A | --- | 1 | 08/02/24 17:02 | --- | DH40103 |
| Aroclor 1262 | ND (0.05) | --- | 8082A | --- | 1 | 08/02/24 17:02 | --- | DH40103 |
| Aroclor 1268 | ND (0.05) | --- | 8082A | --- | 1 | 08/02/24 17:02 | --- | DH40103 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl [2C]* | *73 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *79 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G1155

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 8082A Polychlorinated Biphenyls (PCB) | | | | | | | | | | |
| **Batch DH40103 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0188* | | mg/kg wet | *0.02500* | | *75* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0160* | | mg/kg wet | *0.02500* | | *64* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0178* | | mg/kg wet | *0.02500* | | *71* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 91 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 87 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 99 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0236* | | mg/kg wet | *0.02500* | | *95* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0207* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 83 | 40-140 | 1 | 30 | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 90 | 40-140 | 0.9 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 86 | 40-140 | 2 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 98 | 40-140 | 0.9 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0206* | | mg/kg wet | *0.02500* | | *82* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0232* | | mg/kg wet | *0.02500* | | *93* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0196* | | mg/kg wet | *0.02500* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0203* | | mg/kg wet | *0.02500* | | *81* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G1155

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| SD | Surrogate recovery(ies) diluted below the MRL (SD). |
| D | Diluted. |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24G1155

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24G1155
Date Received: 7/31/2024
Project Due Date: 8/7/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / (No)
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 577286 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 577287 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 577288 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials: MM (Yes) / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Date & Time: 7/31/24 1616
Reviewed By: Date & Time: 7/31/24 16:57

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 246155

| | | | |
|---|---|---|---|
| Turn Time | 5 | Days | Reporting Limits |
| Regulatory State | Massachusetts | | |
| Is this project for any of the following?: | ○ CT RCP | ◉ MA MCP | ○ RGP |
| Electonic Deliverables | ☑ Data Checker | ☑ Other (Please Specify →) | ☑ Excel EDD |

| Company Name | Project # | Project Name |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello; jkitchen, hadam@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: PCB | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7/17/2024 | 14:45 | Grab | Soil | B0-15N15W 0-1 | X | | | | | | | | | | | | | | | |
| 2 | 7/17/2024 | 12:30 | Grab | Soil | B0-15N15E 0-1 | X | | | | | | | | | | | | | | | |
| 3 | 7/17/2024 | 15:20 | Grab | Soil | A0-5W 0-1 | X | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
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**Container Type:** AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — AG
**Container Volume:** 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10
**Preservation Code:** 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1
**Number of Containers per Sample:** 1

**Laboratory Use Only**

Cooler Present: Yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C Ice

**Sampled by :** CI and BB

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| Mary Kate Moreau 7/30/24 13:20 | Secured fridge | 7/31/24 10:00 | 7/31/24 10:00 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| 7/31/24 15:31 | 7/31/24 1531 | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24I0015**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

***REVIEWED***
***By ESS Laboratory at 6:30 pm, Sep 09, 2024***

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0015

## SAMPLE RECEIPT

The following samples were received on September 03, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24I0015-01 | F-0.5 0-1 | Soil | 8082A |
| 24I0015-02 | G-0.5 0-1 | Soil | 8082A |
| 24I0015-03 | H-0.5 0-1 | Soil | 8082A |
| 24I0015-04 | I-0.5 0-1 | Soil | 8082A |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0015

## PROJECT NARRATIVE

**No unusual observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0015

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0015

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24I0015-01 through 24I0015-04**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | (x) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| ( ) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for "'Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? | Yes (x) No ( )* |
| | ***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.** | |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes (x) No ( )* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

***All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: September 09, 2024

Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: F-0.5 0-1
Date Sampled: 08/26/24 08:30
Percent Solids: 83
Initial Volume: 19.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24I0015
ESS Laboratory Sample ID: 24I0015-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 9/3/24 17:10

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 17:55 | --- | DI40304 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 17:55 | --- | DI40304 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 17:55 | --- | DI40304 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 17:55 | --- | DI40304 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 17:55 | --- | DI40304 |
| **Aroclor 1254 [2C]** | **1.0** (0.06) | --- | 8082A | --- | 1 | 09/04/24 17:55 | --- | DI40304 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 17:55 | --- | DI40304 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 17:55 | --- | DI40304 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 17:55 | --- | DI40304 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: G-0.5 0-1
Date Sampled: 08/26/24 08:40
Percent Solids: 84
Initial Volume: 19.1g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24I0015
ESS Laboratory Sample ID: 24I0015-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 9/3/24 17:10

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:15 | --- | DI40304 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:15 | --- | DI40304 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:15 | --- | DI40304 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:15 | --- | DI40304 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:15 | --- | DI40304 |
| **Aroclor 1254 [2C]** | **0.9** (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:15 | --- | DI40304 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:15 | --- | DI40304 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:15 | --- | DI40304 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:15 | --- | DI40304 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *89 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *80 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: H-0.5 0-1
Date Sampled: 08/29/24 15:55
Percent Solids: 83
Initial Volume: 20.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24I0015
ESS Laboratory Sample ID: 24I0015-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 9/3/24 17:10

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:35 | --- | DI40304 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:35 | --- | DI40304 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:35 | --- | DI40304 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:35 | --- | DI40304 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:35 | --- | DI40304 |
| **Aroclor 1254 [2C]** | **0.5** (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:35 | --- | DI40304 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:35 | --- | DI40304 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:35 | --- | DI40304 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:35 | --- | DI40304 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *92 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *72 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: I-0.5 0-1
Date Sampled: 08/29/24 16:05
Percent Solids: 79
Initial Volume: 19.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24I0015
ESS Laboratory Sample ID: 24I0015-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 9/3/24 17:10

## 8082A Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:55 | --- | DI40304 |
| Aroclor 1221 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:55 | --- | DI40304 |
| Aroclor 1232 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:55 | --- | DI40304 |
| Aroclor 1242 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:55 | --- | DI40304 |
| Aroclor 1248 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:55 | --- | DI40304 |
| **Aroclor 1254** | **0.8** (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:55 | --- | DI40304 |
| Aroclor 1260 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:55 | --- | DI40304 |
| Aroclor 1262 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:55 | --- | DI40304 |
| Aroclor 1268 | ND (0.06) | --- | 8082A | --- | 1 | 09/04/24 18:55 | --- | DI40304 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *86 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *74 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0015

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **8082A Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch DI40304 - 3540C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1016 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1221 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1232 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1242 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1248 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1254 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1260 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1262 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 | ND | 0.05 | mg/kg wet | | | | | | | |
| Aroclor 1268 [2C] | ND | 0.05 | mg/kg wet | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0184* | | mg/kg wet | *0.02500* | | *74* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0198* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0170* | | mg/kg wet | *0.02500* | | *68* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0189* | | mg/kg wet | *0.02500* | | *76* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 82 | 40-140 | | | |
| Aroclor 1016 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 85 | 40-140 | | | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 77 | 40-140 | | | |
| Aroclor 1260 [2C] | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 88 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0201* | | mg/kg wet | *0.02500* | | *80* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0215* | | mg/kg wet | *0.02500* | | *86* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0193* | | mg/kg wet | *0.02500* | | *77* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0196* | | mg/kg wet | *0.02500* | | *79* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 85 | 40-140 | 4 | 30 | |
| Aroclor 1016 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 91 | 40-140 | 7 | 30 | |
| Aroclor 1260 | 0.4 | 0.05 | mg/kg wet | 0.5000 | | 81 | 40-140 | 4 | 30 | |
| Aroclor 1260 [2C] | 0.5 | 0.05 | mg/kg wet | 0.5000 | | 92 | 40-140 | 5 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0223* | | mg/kg wet | *0.02500* | | *89* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0207* | | mg/kg wet | *0.02500* | | *83* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0210* | | mg/kg wet | *0.02500* | | *84* | *30-150* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0015

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0015

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 2410015
Date Received: 9/3/2024
Project Due Date: 9/10/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.4 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 587607 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 587608 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 587609 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 587610 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials BSB Yes / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Date & Time: 9/3/24 15:20
Reviewed By: Date & Time: 9/3/24 1537

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24I0015

| | | | |
|---|---|---|---|
| **Turn Time** | 5 | Days | |
| **Regulatory State** | Massachusetts | | |
| **Is this project for any of the following?:** | ○ CT RCP | ◉ MA MCP | ○ RGP |
| **Reporting Limits** | | | |
| **Electonic Deliverables** | ☑ Data Checker | ☑ Excel | |
| | ☑ Other (Please Specify →) | EDD | |

| **Company Name** | **Project #** | **Project Name** |
|---|---|---|
| Civil and Environmental Consultants | 332-344 | MassCEC Phase III - Site 1 |
| **Contact Person** | **Address** | |
| Cassia Dal Bello | 31 Bellows Road | |
| **City** | **State** | **Zip Code** / **PO #** |
| Raynham | MA | 02767 |
| **Telephone Number** | **FAX Number** | **Email Address** |
| 774-501-2176 | | cdalbello; ikitchen, hadam@cecinc.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: PCB | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8-26-24 | 0830 | Grab | Soil | F-0.5 0-1 | X | | | | | | | | | | | | | | |
| 2 | 8-26-24 | 0840 | Grab | Soil | G-0.5 0-1 | X | | | | | | | | | | | | | | |
| 3 | 8-29-24 | 1555 | Grab | Soil | H-0.5 0-1 | X | | | | | | | | | | | | | | |
| 4 | 8-29-24 | 1605 | Grab | Soil | I-0.5 0-1 | X | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

**Container Type:** AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — AG
**Container Volume:** 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10
**Preservation Code:** 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1
**Number of Containers per Sample:** 1

**Laboratory Use Only**

Cooler Present: yes ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.4 °C / Ca

**Sampled by :** DB

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 9/3/24 11:45 | 9/3/24 11:45 | 9/3/24, 15:07 | 9/3/24 15:07 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC - New Bedford (332-344)**
**ESS Laboratory Work Order Number: 24I0766**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 6:30 pm, Oct 01, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 24I0766

## SAMPLE RECEIPT

The following samples were received on September 23, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24I0766-01 | CEC-15-4 0.6-4.6 | Soil | 8270E |
| 24I0766-02 | CEC-14-4 0.6-4.6 | Soil | 8270E |
| 24I0766-03 | CEC-9-4 2-6 | Soil | 8270E |
| 24I0766-04 | CEC-9-4 6-8 | Soil | 8270E |
| 24I0766-05 | CEC-7-4 0-4 | Soil | 8270E |
| 24I0766-06 | CEC-7-4 5-10 | Soil | 8270E |
| 24I0766-07 | CEC-10-4 0-5 | Soil | 8270E |
| 24I0766-08 | CEC-8-4 0-4 | Soil | 8270E |
| 24I0766-09 | CEC-7-3 0-4 | Soil | 8270E |
| 24I0766-10 | CEC-6-3 0-4 | Soil | 8270E |
| 24I0766-11 | CEC-6-3 5-7 | Soil | 8270E |
| 24I0766-12 | CEC-DUP-9-19 | Soil | 8270E |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 24I0766

## PROJECT NARRATIVE

**Semi-Volatile Organic Compounds**

24I0766-01 **Surrogate recovery(ies) above upper control limit (S+).**
2,4,6-Tribromophenol (142% @ 30-130%)

D4I0503-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (106% @ 40-160%)

D4I0503-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4-Dimethylphenol (38% @ 20%), Aniline (38% @ 20%), Azobenzene (21% @ 20%), Isophorone (23% @ 20%), Phenol-d6 (22% @ 20%)

D4I0504-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (126% @ 40-160%)

D4I0504-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4-Dimethylphenol (35% @ 20%), Aniline (46% @ 20%), bis(2-Chloroethyl)ether (20% @ 20%), Isophorone (22% @ 20%), Phenol-d6 (24% @ 20%)

D4I0535-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (110% @ 40-160%), Di-n-octylphthalate (96% @ 80-120%)

D4I0535-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4-Dimethylphenol (36% @ 20%), Aniline (30% @ 20%), Benzo(g,h,i)perylene (23% @ 20%)

D4I0566-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (93% @ 40-160%)

D4I0566-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4-Dimethylphenol (41% @ 20%), Aniline (39% @ 20%), Azobenzene (21% @ 20%), Di-n-octylphthalate (21% @ 20%), Isophorone (27% @ 20%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 24I0766

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 24I0766

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24I0766-01 through 24I0766-12**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | ( ) MassDEP VPH (GC/PID/FID) CAM IV A | ( ) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| (x) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | ( ) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes ( ) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? ***Data User Note:*** ***Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*** | Yes (x) No ( )* |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: October 01, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-15-4 0.6-4.6
Date Sampled: 09/18/24 11:00
Percent Solids: 94
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/23/24 17:34

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 1,2,4-Trichlorobenzene | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 1,2-Dichlorobenzene | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 1,3-Dichlorobenzene | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 1,4-Dichlorobenzene | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 2,4,5-Trichlorophenol | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 2,4,6-Trichlorophenol | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 2,4-Dichlorophenol | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 2,4-Dimethylphenol | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 2,4-Dinitrophenol | ND (1.11) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 2,4-Dinitrotoluene | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 2,6-Dinitrotoluene | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 2-Chloronaphthalene | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 2-Chlorophenol | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 2-Methylnaphthalene | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 2-Methylphenol | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 2-Nitrophenol | ND (0.557) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 3,3′-Dichlorobenzidine | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 3+4-Methylphenol | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 4-Bromophenyl-phenylether | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 4-Chloroaniline | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| 4-Nitrophenol | ND (1.11) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| Acenaphthene | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| **Acenaphthylene** | **0.376** (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| Acetophenone | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| Aniline | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| **Anthracene** | **0.380** (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-15-4 0.6-4.6
Date Sampled: 09/18/24 11:00
Percent Solids: 94
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/23/24 17:34

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| **Benzo(a)anthracene** | **2.20** (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| **Benzo(a)pyrene** | **2.45** (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| **Benzo(b)fluoranthene** | **2.14** (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| **Benzo(g,h,i)perylene** | **1.68** (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| **Benzo(k)fluoranthene** | **1.91** (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| bis(2-Chloroethoxy)methane | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| bis(2-Chloroethyl)ether | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| bis(2-chloroisopropyl)Ether | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| bis(2-Ethylhexyl)phthalate | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| Butylbenzylphthalate | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| **Chrysene** | **2.00** (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| **Dibenzo(a,h)Anthracene** | **0.331** (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| Dibenzofuran | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| Diethylphthalate | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| Dimethylphthalate | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| Di-n-butylphthalate | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| Di-n-octylphthalate | ND (0.557) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| **Fluoranthene** | **4.88** (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| Fluorene | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| Hexachlorobenzene | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| Hexachlorobutadiene | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| Hexachloroethane | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| **Indeno(1,2,3-cd)Pyrene** | **1.67** (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| Isophorone | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| Naphthalene | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| Nitrobenzene | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-15-4 0.6-4.6
Date Sampled: 09/18/24 11:00
Percent Solids: 94
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/23/24 17:34

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| Pentachlorophenol | ND (1.11) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| **Phenanthrene** | **1.11** (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| Phenol | ND (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |
| **Pyrene** | **3.33** (0.278) | --- | 8270E | --- | 1 | NXL | 09/24/24 23:56 | D4I0535 | DI42307 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *94 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *142 %* | *S+* | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *106 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *90 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *104 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *100 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *112 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *86 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-14-4 0.6-4.6
Date Sampled: 09/18/24 13:00
Percent Solids: 94
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/23/24 17:34

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 1,2,4-Trichlorobenzene | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 1,2-Dichlorobenzene | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 1,3-Dichlorobenzene | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 1,4-Dichlorobenzene | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 2,4,5-Trichlorophenol | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 2,4,6-Trichlorophenol | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 2,4-Dichlorophenol | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 2,4-Dimethylphenol | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 2,4-Dinitrophenol | ND (1.06) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 2,4-Dinitrotoluene | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 2,6-Dinitrotoluene | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 2-Chloronaphthalene | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 2-Chlorophenol | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 2-Methylnaphthalene | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 2-Methylphenol | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 2-Nitrophenol | ND (0.532) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 3,3′-Dichlorobenzidine | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 3+4-Methylphenol | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 4-Bromophenyl-phenylether | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 4-Chloroaniline | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| 4-Nitrophenol | ND (1.06) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Acenaphthene | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Acenaphthylene | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Acetophenone | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Aniline | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Anthracene | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-14-4 0.6-4.6
Date Sampled: 09/18/24 13:00
Percent Solids: 94
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/23/24 17:34

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| **Benzo(a)anthracene** | **0.655** (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| **Benzo(a)pyrene** | **0.634** (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| **Benzo(b)fluoranthene** | **0.539** (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| **Benzo(g,h,i)perylene** | **0.384** (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| **Benzo(k)fluoranthene** | **0.526** (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| bis(2-Chloroethoxy)methane | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| bis(2-Chloroethyl)ether | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| bis(2-chloroisopropyl)Ether | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| bis(2-Ethylhexyl)phthalate | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Butylbenzylphthalate | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| **Chrysene** | **0.641** (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Dibenzo(a,h)Anthracene | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Dibenzofuran | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Diethylphthalate | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Dimethylphthalate | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Di-n-butylphthalate | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Di-n-octylphthalate | ND (0.532) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| **Fluoranthene** | **1.71** (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Fluorene | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Hexachlorobenzene | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Hexachlorobutadiene | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Hexachloroethane | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| **Indeno(1,2,3-cd)Pyrene** | **0.411** (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Isophorone | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Naphthalene | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Nitrobenzene | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-14-4 0.6-4.6
Date Sampled: 09/18/24 13:00
Percent Solids: 94
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/23/24 17:34

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Pentachlorophenol | ND (1.06) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| **Phenanthrene** | **0.915** (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| Phenol | ND (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |
| **Pyrene** | **1.12** (0.266) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:27 | D4I0535 | DI42307 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *90 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *76 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *97 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *88 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *87 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *93 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *106 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *91 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-9-4 2-6
Date Sampled: 09/19/24 07:30
Percent Solids: 80
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/23/24 17:34

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.032) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 1,2,4-Trichlorobenzene | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 1,2-Dichlorobenzene | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 1,3-Dichlorobenzene | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 1,4-Dichlorobenzene | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 2,4,5-Trichlorophenol | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 2,4,6-Trichlorophenol | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 2,4-Dichlorophenol | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 2,4-Dimethylphenol | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 2,4-Dinitrophenol | ND (1.30) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 2,4-Dinitrotoluene | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 2,6-Dinitrotoluene | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 2-Chloronaphthalene | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 2-Chlorophenol | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 2-Methylnaphthalene | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 2-Methylphenol | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 2-Nitrophenol | ND (0.649) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 3,3´-Dichlorobenzidine | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 3+4-Methylphenol | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 4-Bromophenyl-phenylether | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 4-Chloroaniline | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| 4-Nitrophenol | ND (1.30) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Acenaphthene | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Acenaphthylene | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Acetophenone | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Aniline | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Anthracene | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-9-4 2-6
Date Sampled: 09/19/24 07:30
Percent Solids: 80
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/23/24 17:34

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| **Benzo(a)anthracene** | **0.338** (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Benzo(a)pyrene | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| **Benzo(b)fluoranthene** | **1.38** (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| **Benzo(g,h,i)perylene** | **1.05** (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| **Benzo(k)fluoranthene** | **0.601** (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| bis(2-Chloroethoxy)methane | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| bis(2-Chloroethyl)ether | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| bis(2-chloroisopropyl)Ether | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| bis(2-Ethylhexyl)phthalate | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Butylbenzylphthalate | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| **Chrysene** | **0.516** (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Dibenzo(a,h)Anthracene | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Dibenzofuran | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Diethylphthalate | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Dimethylphthalate | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Di-n-butylphthalate | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Di-n-octylphthalate | ND (0.649) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| **Fluoranthene** | **0.536** (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Fluorene | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Hexachlorobenzene | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Hexachlorobutadiene | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Hexachloroethane | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| **Indeno(1,2,3-cd)Pyrene** | **0.970** (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Isophorone | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Naphthalene | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Nitrobenzene | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-9-4 2-6
Date Sampled: 09/19/24 07:30
Percent Solids: 80
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/23/24 17:34

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Pentachlorophenol | ND (1.30) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| **Phenanthrene** | **0.395** (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| Phenol | ND (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |
| **Pyrene** | **0.375** (0.325) | --- | 8270E | --- | 1 | NXL | 09/25/24 0:57 | D4I0535 | DI42307 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *91 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *118 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *97 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *87 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *89 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *93 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *93 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *87 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-9-4 6-8
Date Sampled: 09/19/24 07:35
Percent Solids: 91
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/23/24 17:34

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 1,2,4-Trichlorobenzene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 1,2-Dichlorobenzene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 1,3-Dichlorobenzene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 1,4-Dichlorobenzene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 2,4,5-Trichlorophenol | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 2,4,6-Trichlorophenol | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 2,4-Dichlorophenol | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 2,4-Dimethylphenol | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 2,4-Dinitrophenol | ND (1.13) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 2,4-Dinitrotoluene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 2,6-Dinitrotoluene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 2-Chloronaphthalene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 2-Chlorophenol | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 2-Methylnaphthalene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 2-Methylphenol | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 2-Nitrophenol | ND (0.566) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 3,3´-Dichlorobenzidine | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 3+4-Methylphenol | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 4-Bromophenyl-phenylether | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 4-Chloroaniline | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| 4-Nitrophenol | ND (1.13) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Acenaphthene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Acenaphthylene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Acetophenone | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Aniline | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Anthracene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-9-4 6-8
Date Sampled: 09/19/24 07:35
Percent Solids: 91
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/23/24 17:34

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Benzo(a)anthracene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Benzo(a)pyrene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Benzo(b)fluoranthene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Benzo(g,h,i)perylene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Benzo(k)fluoranthene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| bis(2-Chloroethoxy)methane | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| bis(2-Chloroethyl)ether | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| bis(2-chloroisopropyl)Ether | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| bis(2-Ethylhexyl)phthalate | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Butylbenzylphthalate | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Chrysene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Dibenzo(a,h)Anthracene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Dibenzofuran | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Diethylphthalate | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Dimethylphthalate | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Di-n-butylphthalate | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Di-n-octylphthalate | ND (0.566) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Fluoranthene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Fluorene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Hexachlorobenzene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Hexachlorobutadiene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Hexachloroethane | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Indeno(1,2,3-cd)Pyrene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Isophorone | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Naphthalene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Nitrobenzene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-9-4 6-8
Date Sampled: 09/19/24 07:35
Percent Solids: 91
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/23/24 17:34

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Pentachlorophenol | ND (1.13) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Phenanthrene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Phenol | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |
| Pyrene | ND (0.283) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:28 | D4I0535 | DI42307 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *93 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *114 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *106 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *94 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *107 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *99 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *110 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *93 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-7-4 0-4
Date Sampled: 09/19/24 08:00
Percent Solids: 92
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/23/24 17:34

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.041** (0.028) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 1,2,4-Trichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 1,2-Dichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 1,3-Dichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 1,4-Dichlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 2,4,5-Trichlorophenol | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 2,4,6-Trichlorophenol | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 2,4-Dichlorophenol | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 2,4-Dimethylphenol | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 2,4-Dinitrophenol | ND (1.11) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 2,4-Dinitrotoluene | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 2,6-Dinitrotoluene | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 2-Chloronaphthalene | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 2-Chlorophenol | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 2-Methylnaphthalene | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 2-Methylphenol | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 2-Nitrophenol | ND (0.557) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 3,3′-Dichlorobenzidine | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 3+4-Methylphenol | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 4-Bromophenyl-phenylether | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 4-Chloroaniline | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| 4-Nitrophenol | ND (1.11) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| **Acenaphthene** | **0.998** (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| **Acenaphthylene** | **0.621** (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| Acetophenone | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| Aniline | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| **Anthracene** | **2.63** (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-7-4 0-4
Date Sampled: 09/19/24 08:00
Percent Solids: 92
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/23/24 17:34

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| **Benzo(a)anthracene** | **9.24** (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| **Benzo(a)pyrene** | **7.84** (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| **Benzo(b)fluoranthene** | **7.96** (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| **Benzo(g,h,i)perylene** | **4.38** (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| **Benzo(k)fluoranthene** | **6.27** (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| bis(2-Chloroethoxy)methane | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| bis(2-Chloroethyl)ether | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| bis(2-chloroisopropyl)Ether | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| bis(2-Ethylhexyl)phthalate | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| Butylbenzylphthalate | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| **Chrysene** | **8.60** (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| **Dibenzo(a,h)Anthracene** | **1.23** (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| **Dibenzofuran** | **0.426** (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| Diethylphthalate | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| Dimethylphthalate | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| Di-n-butylphthalate | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| Di-n-octylphthalate | ND (0.557) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| **Fluoranthene** | **17.3** (0.557) | --- | 8270E | --- | 2 | NXL | 09/30/24 19:15 | D4I0535 | DI42307 |
| **Fluorene** | **0.927** (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| Hexachlorobenzene | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| Hexachlorobutadiene | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| Hexachloroethane | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| **Indeno(1,2,3-cd)Pyrene** | **4.75** (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| Isophorone | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| **Naphthalene** | **0.290** (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| Nitrobenzene | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-7-4 0-4
Date Sampled: 09/19/24 08:00
Percent Solids: 92
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/23/24 17:34

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| Pentachlorophenol | ND (1.11) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| **Phenanthrene** | **10.4** (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| Phenol | ND (0.279) | --- | 8270E | --- | 1 | NXL | 09/25/24 1:59 | D4I0535 | DI42307 |
| **Pyrene** | **16.9** (0.557) | --- | 8270E | --- | 2 | NXL | 09/30/24 19:15 | D4I0535 | DI42307 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *79 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *93 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *93 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *77 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *89 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *82 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *97 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *106 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-7-4 5-10
Date Sampled: 09/19/24 08:10
Percent Solids: 93
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.026) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 1,2,4-Trichlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 1,2-Dichlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 1,3-Dichlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 1,4-Dichlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 2,4,5-Trichlorophenol | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 2,4,6-Trichlorophenol | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 2,4-Dichlorophenol | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 2,4-Dimethylphenol | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 2,4-Dinitrophenol | ND (1.06) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 2,4-Dinitrotoluene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 2,6-Dinitrotoluene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 2-Chloronaphthalene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 2-Chlorophenol | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 2-Methylnaphthalene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 2-Methylphenol | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 2-Nitrophenol | ND (0.530) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 3,3′-Dichlorobenzidine | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 3+4-Methylphenol | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 4-Bromophenyl-phenylether | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 4-Chloroaniline | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| 4-Nitrophenol | ND (1.06) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Acenaphthene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Acenaphthylene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Acetophenone | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Aniline | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Anthracene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-7-4 5-10
Date Sampled: 09/19/24 08:10
Percent Solids: 93
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Benzo(a)anthracene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Benzo(a)pyrene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Benzo(b)fluoranthene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Benzo(g,h,i)perylene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Benzo(k)fluoranthene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| bis(2-Chloroethoxy)methane | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| bis(2-Chloroethyl)ether | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| bis(2-chloroisopropyl)Ether | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| bis(2-Ethylhexyl)phthalate | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Butylbenzylphthalate | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Chrysene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Dibenzo(a,h)Anthracene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Dibenzofuran | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Diethylphthalate | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Dimethylphthalate | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Di-n-butylphthalate | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Di-n-octylphthalate | ND (0.530) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Fluoranthene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Fluorene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Hexachlorobenzene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Hexachlorobutadiene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Hexachloroethane | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Indeno(1,2,3-cd)Pyrene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Isophorone | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Naphthalene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Nitrobenzene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-7-4 5-10
Date Sampled: 09/19/24 08:10
Percent Solids: 93
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Pentachlorophenol | ND (1.06) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Phenanthrene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Phenol | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |
| Pyrene | ND (0.265) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:05 | D4I0504 | DI42406 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *91 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *80 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *95 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *84 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *101 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *91 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *106 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *95 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-10-4 0-5
Date Sampled: 09/19/24 10:00
Percent Solids: 93
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.027** (0.027) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 1,2,4-Trichlorobenzene | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 1,2-Dichlorobenzene | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 1,3-Dichlorobenzene | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 1,4-Dichlorobenzene | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 2,4,5-Trichlorophenol | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 2,4,6-Trichlorophenol | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 2,4-Dichlorophenol | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 2,4-Dimethylphenol | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 2,4-Dinitrophenol | ND (1.08) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 2,4-Dinitrotoluene | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 2,6-Dinitrotoluene | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 2-Chloronaphthalene | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 2-Chlorophenol | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 2-Methylnaphthalene | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 2-Methylphenol | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 2-Nitrophenol | ND (0.539) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 3,3′-Dichlorobenzidine | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 3+4-Methylphenol | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 4-Bromophenyl-phenylether | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 4-Chloroaniline | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| 4-Nitrophenol | ND (1.08) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| Acenaphthene | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| **Acenaphthylene** | **0.652** (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| Acetophenone | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| Aniline | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| **Anthracene** | **0.947** (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-10-4 0-5
Date Sampled: 09/19/24 10:00
Percent Solids: 93
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| **Benzo(a)anthracene** | **3.65** (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| **Benzo(a)pyrene** | **3.33** (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| **Benzo(b)fluoranthene** | **3.66** (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| **Benzo(g,h,i)perylene** | **2.31** (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| **Benzo(k)fluoranthene** | **1.47** (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| bis(2-Chloroethoxy)methane | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| bis(2-Chloroethyl)ether | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| bis(2-chloroisopropyl)Ether | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| bis(2-Ethylhexyl)phthalate | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| Butylbenzylphthalate | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| **Chrysene** | **3.70** (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| **Dibenzo(a,h)Anthracene** | **0.408** (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| Dibenzofuran | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| Diethylphthalate | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| Dimethylphthalate | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| Di-n-butylphthalate | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| Di-n-octylphthalate | ND (0.539) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| **Fluoranthene** | **5.97** (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| **Fluorene** | **0.424** (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| Hexachlorobenzene | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| Hexachlorobutadiene | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| Hexachloroethane | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| **Indeno(1,2,3-cd)Pyrene** | **2.13** (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| Isophorone | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| Naphthalene | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| Nitrobenzene | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-10-4 0-5
Date Sampled: 09/19/24 10:00
Percent Solids: 93
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| Pentachlorophenol | ND (1.08) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| **Phenanthrene** | **3.71** (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| Phenol | ND (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |
| **Pyrene** | **7.21** (0.269) | --- | 8270E | --- | 1 | NXL | 09/24/24 18:35 | D4I0504 | DI42406 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *62 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *62 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *70 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *63 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *71 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *64 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *78 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *77 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-8-4 0-4
Date Sampled: 09/19/24 10:30
Percent Solids: 95
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 1,2,4-Trichlorobenzene | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 1,2-Dichlorobenzene | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 1,3-Dichlorobenzene | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 1,4-Dichlorobenzene | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 2,4,5-Trichlorophenol | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 2,4,6-Trichlorophenol | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 2,4-Dichlorophenol | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 2,4-Dimethylphenol | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 2,4-Dinitrophenol | ND (1.07) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 2,4-Dinitrotoluene | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 2,6-Dinitrotoluene | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 2-Chloronaphthalene | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 2-Chlorophenol | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 2-Methylnaphthalene | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 2-Methylphenol | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 2-Nitrophenol | ND (0.534) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 3,3´-Dichlorobenzidine | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 3+4-Methylphenol | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 4-Bromophenyl-phenylether | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 4-Chloroaniline | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| 4-Nitrophenol | ND (1.07) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Acenaphthene | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Acenaphthylene | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Acetophenone | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Aniline | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| **Anthracene** | **0.289** (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-8-4 0-4
Date Sampled: 09/19/24 10:30
Percent Solids: 95
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| **Benzo(a)anthracene** | **0.860** (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| **Benzo(a)pyrene** | **0.950** (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| **Benzo(b)fluoranthene** | **1.07** (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| **Benzo(g,h,i)perylene** | **0.684** (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| **Benzo(k)fluoranthene** | **0.399** (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| bis(2-Chloroethoxy)methane | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| bis(2-Chloroethyl)ether | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| bis(2-chloroisopropyl)Ether | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| bis(2-Ethylhexyl)phthalate | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Butylbenzylphthalate | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| **Chrysene** | **0.861** (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Dibenzo(a,h)Anthracene | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Dibenzofuran | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Diethylphthalate | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Dimethylphthalate | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Di-n-butylphthalate | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Di-n-octylphthalate | ND (0.534) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| **Fluoranthene** | **1.75** (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Fluorene | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Hexachlorobenzene | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Hexachlorobutadiene | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Hexachloroethane | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| **Indeno(1,2,3-cd)Pyrene** | **0.651** (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Isophorone | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Naphthalene | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Nitrobenzene | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-8-4 0-4
Date Sampled: 09/19/24 10:30
Percent Solids: 95
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Pentachlorophenol | ND (1.07) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| **Phenanthrene** | **1.02** (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| Phenol | ND (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |
| **Pyrene** | **1.62** (0.267) | --- | 8270E | --- | 1 | NXL | 09/24/24 19:06 | D4I0504 | DI42406 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *81 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *84 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *89 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *79 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *93 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *83 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *101 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *89 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-7-3 0-4
Date Sampled: 09/19/24 10:45
Percent Solids: 90
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.064** (0.027) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 1,2,4-Trichlorobenzene | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 1,2-Dichlorobenzene | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 1,3-Dichlorobenzene | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 1,4-Dichlorobenzene | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 2,4,5-Trichlorophenol | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 2,4,6-Trichlorophenol | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 2,4-Dichlorophenol | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 2,4-Dimethylphenol | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 2,4-Dinitrophenol | ND (1.09) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 2,4-Dinitrotoluene | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 2,6-Dinitrotoluene | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 2-Chloronaphthalene | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 2-Chlorophenol | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 2-Methylnaphthalene | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 2-Methylphenol | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 2-Nitrophenol | ND (0.544) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 3,3′-Dichlorobenzidine | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 3+4-Methylphenol | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 4-Bromophenyl-phenylether | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 4-Chloroaniline | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| 4-Nitrophenol | ND (1.09) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| **Acenaphthene** | **0.898** (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| **Acenaphthylene** | **0.467** (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| Acetophenone | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| Aniline | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| **Anthracene** | **1.96** (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-7-3 0-4
Date Sampled: 09/19/24 10:45
Percent Solids: 90
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| **Benzo(a)anthracene** | **6.17** (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| **Benzo(a)pyrene** | **5.83** (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| **Benzo(b)fluoranthene** | **6.72** (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| **Benzo(g,h,i)perylene** | **3.39** (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| **Benzo(k)fluoranthene** | **2.75** (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| bis(2-Chloroethoxy)methane | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| bis(2-Chloroethyl)ether | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| bis(2-chloroisopropyl)Ether | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| bis(2-Ethylhexyl)phthalate | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| Butylbenzylphthalate | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| **Chrysene** | **6.30** (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| **Dibenzo(a,h)Anthracene** | **0.706** (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| **Dibenzofuran** | **0.509** (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| Diethylphthalate | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| Dimethylphthalate | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| Di-n-butylphthalate | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| Di-n-octylphthalate | ND (0.544) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| **Fluoranthene** | **13.5** (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| **Fluorene** | **0.801** (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| Hexachlorobenzene | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| Hexachlorobutadiene | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| Hexachloroethane | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| **Indeno(1,2,3-cd)Pyrene** | **3.35** (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| Isophorone | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| **Naphthalene** | **0.386** (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| Nitrobenzene | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-7-3 0-4
Date Sampled: 09/19/24 10:45
Percent Solids: 90
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| Pentachlorophenol | ND (1.09) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| **Phenanthrene** | **9.12** (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| Phenol | ND (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |
| **Pyrene** | **12.0** (0.272) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:03 | D4I0566 | DI42406 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *91 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *86 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *98 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *88 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *100 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *95 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *110 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *96 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-3 0-4
Date Sampled: 09/19/24 11:00
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 1,2,4-Trichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 1,2-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 1,3-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 1,4-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 2,4,5-Trichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 2,4,6-Trichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 2,4-Dichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 2,4-Dimethylphenol | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 2,4-Dinitrophenol | ND (1.11) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 2,4-Dinitrotoluene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 2,6-Dinitrotoluene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 2-Chloronaphthalene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 2-Chlorophenol | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 2-Methylnaphthalene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 2-Methylphenol | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 2-Nitrophenol | ND (0.553) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 3,3′-Dichlorobenzidine | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 3+4-Methylphenol | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 4-Bromophenyl-phenylether | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 4-Chloroaniline | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| 4-Nitrophenol | ND (1.11) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| Acenaphthene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| **Acenaphthylene** | **0.593** (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| Acetophenone | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| Aniline | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| **Anthracene** | **0.407** (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-3 0-4
Date Sampled: 09/19/24 11:00
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| **Benzo(a)anthracene** | **3.20** (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| **Benzo(a)pyrene** | **3.62** (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| **Benzo(b)fluoranthene** | **4.02** (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| **Benzo(g,h,i)perylene** | **2.47** (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| **Benzo(k)fluoranthene** | **1.56** (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| bis(2-Chloroethoxy)methane | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| bis(2-Chloroethyl)ether | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| bis(2-chloroisopropyl)Ether | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| bis(2-Ethylhexyl)phthalate | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| Butylbenzylphthalate | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| **Chrysene** | **3.02** (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| **Dibenzo(a,h)Anthracene** | **0.436** (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| Dibenzofuran | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| Diethylphthalate | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| Dimethylphthalate | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| Di-n-butylphthalate | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| Di-n-octylphthalate | ND (0.553) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| **Fluoranthene** | **5.24** (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| Fluorene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| Hexachlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| Hexachlorobutadiene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| Hexachloroethane | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| **Indeno(1,2,3-cd)Pyrene** | **2.51** (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| Isophorone | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| Naphthalene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| Nitrobenzene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-3 0-4
Date Sampled: 09/19/24 11:00
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| Pentachlorophenol | ND (1.11) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| **Phenanthrene** | **0.869** (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| Phenol | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |
| **Pyrene** | **5.25** (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 18:33 | D4I0566 | DI42406 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *88 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *86 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *97 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *86 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *100 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *93 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *110 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *92 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-3 5-7
Date Sampled: 09/19/24 11:05
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.028) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 1,2,4-Trichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 1,2-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 1,3-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 1,4-Dichlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 2,4,5-Trichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 2,4,6-Trichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 2,4-Dichlorophenol | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 2,4-Dimethylphenol | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 2,4-Dinitrophenol | ND (1.11) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 2,4-Dinitrotoluene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 2,6-Dinitrotoluene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 2-Chloronaphthalene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 2-Chlorophenol | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 2-Methylnaphthalene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 2-Methylphenol | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 2-Nitrophenol | ND (0.554) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 3,3′-Dichlorobenzidine | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 3+4-Methylphenol | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 4-Bromophenyl-phenylether | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 4-Chloroaniline | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| 4-Nitrophenol | ND (1.11) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Acenaphthene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Acenaphthylene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Acetophenone | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Aniline | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Anthracene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-3 5-7
Date Sampled: 09/19/24 11:05
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Benzo(a)anthracene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Benzo(a)pyrene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Benzo(b)fluoranthene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Benzo(g,h,i)perylene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Benzo(k)fluoranthene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| bis(2-Chloroethoxy)methane | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| bis(2-Chloroethyl)ether | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| bis(2-chloroisopropyl)Ether | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| bis(2-Ethylhexyl)phthalate | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Butylbenzylphthalate | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Chrysene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Dibenzo(a,h)Anthracene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Dibenzofuran | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Diethylphthalate | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Dimethylphthalate | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Di-n-butylphthalate | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Di-n-octylphthalate | ND (0.554) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Fluoranthene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Fluorene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Hexachlorobenzene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Hexachlorobutadiene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Hexachloroethane | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Indeno(1,2,3-cd)Pyrene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Isophorone | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Naphthalene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Nitrobenzene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-6-3 5-7
Date Sampled: 09/19/24 11:05
Percent Solids: 91
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Pentachlorophenol | ND (1.11) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Phenanthrene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Phenol | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |
| Pyrene | ND (0.277) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:04 | D4I0566 | DI42406 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *94 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *86 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *98 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *83 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *102 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *89 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *108 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *93 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-DUP-9-19
Date Sampled: 09/19/24 10:50
Percent Solids: 93
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **1,1-Biphenyl** | **0.042** (0.026) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 1,2,4-Trichlorobenzene | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 1,2-Dichlorobenzene | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 1,3-Dichlorobenzene | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 1,4-Dichlorobenzene | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 2,4,5-Trichlorophenol | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 2,4,6-Trichlorophenol | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 2,4-Dichlorophenol | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 2,4-Dimethylphenol | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 2,4-Dinitrophenol | ND (1.03) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 2,4-Dinitrotoluene | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 2,6-Dinitrotoluene | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 2-Chloronaphthalene | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 2-Chlorophenol | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 2-Methylnaphthalene | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 2-Methylphenol | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 2-Nitrophenol | ND (0.513) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 3,3′-Dichlorobenzidine | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 3+4-Methylphenol | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 4-Bromophenyl-phenylether | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 4-Chloroaniline | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| 4-Nitrophenol | ND (1.03) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| **Acenaphthene** | **0.409** (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| **Acenaphthylene** | **0.432** (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| Acetophenone | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| Aniline | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| **Anthracene** | **0.839** (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-DUP-9-19
Date Sampled: 09/19/24 10:50
Percent Solids: 93
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| **Benzo(a)anthracene** | **2.29** (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| **Benzo(a)pyrene** | **2.55** (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| **Benzo(b)fluoranthene** | **2.84** (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| **Benzo(g,h,i)perylene** | **1.82** (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| **Benzo(k)fluoranthene** | **1.08** (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| bis(2-Chloroethoxy)methane | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| bis(2-Chloroethyl)ether | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| bis(2-chloroisopropyl)Ether | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| bis(2-Ethylhexyl)phthalate | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| Butylbenzylphthalate | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| **Chrysene** | **2.46** (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| **Dibenzo(a,h)Anthracene** | **0.335** (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| **Dibenzofuran** | **0.280** (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| Diethylphthalate | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| Dimethylphthalate | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| Di-n-butylphthalate | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| Di-n-octylphthalate | ND (0.513) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| **Fluoranthene** | **5.26** (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| **Fluorene** | **0.398** (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| Hexachlorobenzene | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| Hexachlorobutadiene | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| Hexachloroethane | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| **Indeno(1,2,3-cd)Pyrene** | **1.59** (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| Isophorone | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| **Naphthalene** | **0.305** (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| Nitrobenzene | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford
Client Sample ID: CEC-DUP-9-19
Date Sampled: 09/19/24 10:50
Percent Solids: 93
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0766
ESS Laboratory Sample ID: 24I0766-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 10:45

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| Pentachlorophenol | ND (1.03) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| **Phenanthrene** | **3.98** (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| Phenol | ND (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |
| **Pyrene** | **5.06** (0.256) | --- | 8270E | --- | 1 | NXL | 09/25/24 19:34 | D4I0566 | DI42406 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *90 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *81 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *99 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *81 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *102 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *90 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *111 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *89 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 24I0766

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DI42307 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 24I0766

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DI42307 - 3546** | | | | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.37* | | mg/kg wet | *2.500* | | *95* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.50* | | mg/kg wet | *3.750* | | *93* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.72* | | mg/kg wet | *3.750* | | *99* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.24* | | mg/kg wet | *2.500* | | *90* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.96* | | mg/kg wet | *3.750* | | *106* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.49* | | mg/kg wet | *2.500* | | *99* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *4.12* | | mg/kg wet | *3.750* | | *110* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.75* | | mg/kg wet | *2.500* | | *110* | *30-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.07 | 0.025 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| 1,2-Dichlorobenzene | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| 1,3-Dichlorobenzene | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.19 | 0.250 | mg/kg wet | 2.500 | | 88 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.01 | 0.250 | mg/kg wet | 2.500 | | 80 | 30-130 | | | |
| 2,4-Dichlorophenol | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 30-130 | | | |
| 2,4-Dimethylphenol | 2.60 | 0.250 | mg/kg wet | 2.500 | | 104 | 30-130 | | | |
| 2,4-Dinitrophenol | 2.57 | 1.00 | mg/kg wet | 2.500 | | 103 | 15-140 | | | |
| 2,4-Dinitrotoluene | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| 2-Chloronaphthalene | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| 2-Chlorophenol | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 30-130 | | | |
| 2-Methylnaphthalene | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| 2-Methylphenol | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 15-140 | | | |
| 2-Nitrophenol | 1.90 | 0.500 | mg/kg wet | 2.500 | | 76 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.34 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |
| 3+4-Methylphenol | 4.55 | 0.250 | mg/kg wet | 5.000 | | 91 | 15-140 | | | |
| 4-Bromophenyl-phenylether | 2.34 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 24I0766

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DI42307 - 3546** | | | | | | | | | | |
| 4-Chloroaniline | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 15-140 | | | |
| 4-Nitrophenol | 2.24 | 1.00 | mg/kg wet | 2.500 | | 90 | 15-140 | | | |
| Acenaphthene | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Acenaphthylene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Acetophenone | 2.16 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| Aniline | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | | | |
| Anthracene | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Azobenzene | 2.64 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| Benzo(a)anthracene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Benzo(a)pyrene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 2.16 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 1.94 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.82 | 0.250 | mg/kg wet | 2.500 | | 113 | 40-140 | | | |
| Butylbenzylphthalate | 2.84 | 0.250 | mg/kg wet | 2.500 | | 114 | 40-140 | | | |
| Chrysene | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Dibenzofuran | 2.06 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | | | |
| Diethylphthalate | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | | | |
| Dimethylphthalate | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 15-140 | | | |
| Di-n-butylphthalate | 2.76 | 0.250 | mg/kg wet | 2.500 | | 111 | 40-140 | | | |
| Di-n-octylphthalate | 2.94 | 0.500 | mg/kg wet | 2.500 | | 118 | 40-140 | | | |
| Fluoranthene | 2.25 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Fluorene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Hexachlorobenzene | 2.04 | 0.250 | mg/kg wet | 2.500 | | 82 | 40-140 | | | |
| Hexachlorobutadiene | 2.01 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | | | |
| Hexachloroethane | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.31 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | | | |
| Isophorone | 2.19 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | | | |
| Naphthalene | 1.95 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Nitrobenzene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| N-Nitrosodimethylamine | 1.85 | 0.250 | mg/kg wet | 2.500 | | 74 | 40-140 | | | |
| Pentachlorophenol | 1.81 | 1.00 | mg/kg wet | 2.500 | | 73 | 15-140 | | | |
| Phenanthrene | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Phenol | 2.16 | 0.250 | mg/kg wet | 2.500 | | 86 | 15-140 | | | |
| Pyrene | 2.65 | 0.250 | mg/kg wet | 2.500 | | 106 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.16* | | mg/kg wet | *2.500* | | *87* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.27* | | mg/kg wet | *3.750* | | *87* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.51* | | mg/kg wet | *3.750* | | *94* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.16* | | mg/kg wet | *2.500* | | *87* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.60* | | mg/kg wet | *3.750* | | *96* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.22* | | mg/kg wet | *2.500* | | *89* | *30-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 24I0766

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DI42307 - 3546** | | | | | | | | | | |
| *Surrogate: Phenol-d6* | *3.86* | | mg/kg wet | *3.750* | | *103* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.63* | | mg/kg wet | *2.500* | | *105* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.06 | 0.025 | mg/kg wet | 2.500 | | 83 | 40-140 | 0.3 | 30 | |
| 1,2,4-Trichlorobenzene | 1.96 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | 2 | 30 | |
| 1,2-Dichlorobenzene | 1.99 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 2 | 30 | |
| 1,3-Dichlorobenzene | 2.03 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | 3 | 30 | |
| 1,4-Dichlorobenzene | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 0.1 | 30 | |
| 2,4,5-Trichlorophenol | 2.09 | 0.250 | mg/kg wet | 2.500 | | 84 | 30-130 | 5 | 30 | |
| 2,4,6-Trichlorophenol | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 30-130 | 6 | 30 | |
| 2,4-Dichlorophenol | 1.91 | 0.250 | mg/kg wet | 2.500 | | 76 | 30-130 | 0.9 | 30 | |
| 2,4-Dimethylphenol | 2.55 | 0.250 | mg/kg wet | 2.500 | | 102 | 30-130 | 2 | 30 | |
| 2,4-Dinitrophenol | 2.55 | 1.00 | mg/kg wet | 2.500 | | 102 | 15-140 | 0.9 | 30 | |
| 2,4-Dinitrotoluene | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 1 | 30 | |
| 2,6-Dinitrotoluene | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 2 | 30 | |
| 2-Chloronaphthalene | 2.07 | 0.250 | mg/kg wet | 2.500 | | 83 | 40-140 | 1 | 30 | |
| 2-Chlorophenol | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 30-130 | 0.2 | 30 | |
| 2-Methylnaphthalene | 1.92 | 0.250 | mg/kg wet | 2.500 | | 77 | 40-140 | 0.1 | 30 | |
| 2-Methylphenol | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 15-140 | 0.4 | 30 | |
| 2-Nitrophenol | 1.96 | 0.500 | mg/kg wet | 2.500 | | 79 | 30-130 | 3 | 30 | |
| 3,3´-Dichlorobenzidine | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 2 | 30 | |
| 3+4-Methylphenol | 4.54 | 0.250 | mg/kg wet | 5.000 | | 91 | 15-140 | 0.3 | 30 | |
| 4-Bromophenyl-phenylether | 2.33 | 0.250 | mg/kg wet | 2.500 | | 93 | 40-140 | 0.3 | 30 | |
| 4-Chloroaniline | 1.94 | 0.250 | mg/kg wet | 2.500 | | 78 | 15-140 | 2 | 30 | |
| 4-Nitrophenol | 2.26 | 1.00 | mg/kg wet | 2.500 | | 90 | 15-140 | 0.9 | 30 | |
| Acenaphthene | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 0.3 | 30 | |
| Acenaphthylene | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 1 | 30 | |
| Acetophenone | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 2 | 30 | |
| Aniline | 1.89 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | 2 | 30 | |
| Anthracene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 0.5 | 30 | |
| Azobenzene | 2.58 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 2 | 30 | |
| Benzo(a)anthracene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 0.2 | 30 | |
| Benzo(a)pyrene | 2.40 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 0.6 | 30 | |
| Benzo(b)fluoranthene | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 0.6 | 30 | |
| Benzo(g,h,i)perylene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 6 | 30 | |
| Benzo(k)fluoranthene | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | 1 | 30 | |
| bis(2-Chloroethoxy)methane | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 1 | 30 | |
| bis(2-Chloroethyl)ether | 2.20 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 0.6 | 30 | |
| bis(2-chloroisopropyl)Ether | 1.90 | 0.250 | mg/kg wet | 2.500 | | 76 | 40-140 | 2 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.68 | 0.250 | mg/kg wet | 2.500 | | 107 | 40-140 | 5 | 30 | |
| Butylbenzylphthalate | 2.80 | 0.250 | mg/kg wet | 2.500 | | 112 | 40-140 | 1 | 30 | |
| Chrysene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 0.7 | 30 | |
| Dibenzo(a,h)Anthracene | 2.50 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 4 | 30 | |
| Dibenzofuran | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | 2 | 30 | |
| Diethylphthalate | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 2 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 24I0766

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DI42307 - 3546** | | | | | | | | | | |
| Dimethylphthalate | 2.50 | 0.250 | mg/kg wet | 2.500 | | 100 | 15-140 | 0.5 | 30 | |
| Di-n-butylphthalate | 2.69 | 0.250 | mg/kg wet | 2.500 | | 108 | 40-140 | 3 | 30 | |
| Di-n-octylphthalate | 2.81 | 0.500 | mg/kg wet | 2.500 | | 112 | 40-140 | 5 | 30 | |
| Fluoranthene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 0.5 | 30 | |
| Fluorene | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 0.5 | 30 | |
| Hexachlorobenzene | 2.02 | 0.250 | mg/kg wet | 2.500 | | 81 | 40-140 | 1 | 30 | |
| Hexachlorobutadiene | 1.99 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 1 | 30 | |
| Hexachloroethane | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 1 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 6 | 30 | |
| Isophorone | 2.22 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | 1 | 30 | |
| Naphthalene | 1.94 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | 0.3 | 30 | |
| Nitrobenzene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | 2 | 30 | |
| N-Nitrosodimethylamine | 1.94 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | 5 | 30 | |
| Pentachlorophenol | 1.89 | 1.00 | mg/kg wet | 2.500 | | 76 | 15-140 | 4 | 30 | |
| Phenanthrene | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | 0.4 | 30 | |
| Phenol | 2.19 | 0.250 | mg/kg wet | 2.500 | | 88 | 15-140 | 1 | 30 | |
| Pyrene | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | 2 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.19* | | mg/kg wet | *2.500* | | *88* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.22* | | mg/kg wet | *3.750* | | *86* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.40* | | mg/kg wet | *3.750* | | *91* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.11* | | mg/kg wet | *2.500* | | *84* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.47* | | mg/kg wet | *3.750* | | *93* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.17* | | mg/kg wet | *2.500* | | *87* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *3.78* | | mg/kg wet | *3.750* | | *101* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.47* | | mg/kg wet | *2.500* | | *99* | *30-130* | | | |
| **Batch DI42406 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 24I0766

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DI42406 - 3546** | | | | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.44* | | mg/kg wet | *2.500* | | *98* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.28* | | mg/kg wet | *3.750* | | *87* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.91* | | mg/kg wet | *3.750* | | *104* | *30-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 24I0766

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DI42406 - 3546** | | | | | | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.25* | | mg/kg wet | *2.500* | | *90* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *4.22* | | mg/kg wet | *3.750* | | *113* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.58* | | mg/kg wet | *2.500* | | *103* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *4.43* | | mg/kg wet | *3.750* | | *118* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.62* | | mg/kg wet | *2.500* | | *105* | *30-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.25 | 0.025 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 2.14 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| 1,2-Dichlorobenzene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| 1,3-Dichlorobenzene | 2.24 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.24 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 30-130 | | | |
| 2,4-Dichlorophenol | 2.14 | 0.250 | mg/kg wet | 2.500 | | 86 | 30-130 | | | |
| 2,4-Dimethylphenol | 2.85 | 0.250 | mg/kg wet | 2.500 | | 114 | 30-130 | | | |
| 2,4-Dinitrophenol | 2.59 | 1.00 | mg/kg wet | 2.500 | | 104 | 15-140 | | | |
| 2,4-Dinitrotoluene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| 2-Chloronaphthalene | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| 2-Chlorophenol | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 30-130 | | | |
| 2-Methylnaphthalene | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| 2-Methylphenol | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 15-140 | | | |
| 2-Nitrophenol | 2.19 | 0.500 | mg/kg wet | 2.500 | | 88 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| 3+4-Methylphenol | 5.14 | 0.250 | mg/kg wet | 5.000 | | 103 | 15-140 | | | |
| 4-Bromophenyl-phenylether | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| 4-Chloroaniline | 2.03 | 0.250 | mg/kg wet | 2.500 | | 81 | 15-140 | | | |
| 4-Nitrophenol | 2.46 | 1.00 | mg/kg wet | 2.500 | | 98 | 15-140 | | | |
| Acenaphthene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Acenaphthylene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| Acetophenone | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| Aniline | 1.94 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Anthracene | 2.50 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Azobenzene | 2.74 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | | | |
| Benzo(a)anthracene | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Benzo(a)pyrene | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.60 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.80 | 0.250 | mg/kg wet | 2.500 | | 112 | 40-140 | | | |
| Butylbenzylphthalate | 2.88 | 0.250 | mg/kg wet | 2.500 | | 115 | 40-140 | | | |
| Chrysene | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 24I0766

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DI42406 - 3546** | | | | | | | | | | |
| Dibenzo(a,h)Anthracene | 2.51 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Dibenzofuran | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Diethylphthalate | 2.72 | 0.250 | mg/kg wet | 2.500 | | 109 | 40-140 | | | |
| Dimethylphthalate | 2.61 | 0.250 | mg/kg wet | 2.500 | | 104 | 15-140 | | | |
| Di-n-butylphthalate | 2.81 | 0.250 | mg/kg wet | 2.500 | | 112 | 40-140 | | | |
| Di-n-octylphthalate | 2.93 | 0.500 | mg/kg wet | 2.500 | | 117 | 40-140 | | | |
| Fluoranthene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Fluorene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Hexachlorobenzene | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Hexachlorobutadiene | 2.14 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Hexachloroethane | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| Isophorone | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| Naphthalene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Nitrobenzene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| N-Nitrosodimethylamine | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Pentachlorophenol | 1.87 | 1.00 | mg/kg wet | 2.500 | | 75 | 15-140 | | | |
| Phenanthrene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Phenol | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 15-140 | | | |
| Pyrene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.43* | | mg/kg wet | *2.500* | | *97* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.39* | | mg/kg wet | *3.750* | | *90* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.91* | | mg/kg wet | *3.750* | | *104* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.36* | | mg/kg wet | *2.500* | | *94* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *4.04* | | mg/kg wet | *3.750* | | *108* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.49* | | mg/kg wet | *2.500* | | *100* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *4.34* | | mg/kg wet | *3.750* | | *116* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.61* | | mg/kg wet | *2.500* | | *104* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.29 | 0.025 | mg/kg wet | 2.500 | | 91 | 40-140 | 2 | 30 | |
| 1,2,4-Trichlorobenzene | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 0.2 | 30 | |
| 1,2-Dichlorobenzene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 4 | 30 | |
| 1,3-Dichlorobenzene | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 0.04 | 30 | |
| 1,4-Dichlorobenzene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 1 | 30 | |
| 2,4,5-Trichlorophenol | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 30-130 | 0.3 | 30 | |
| 2,4,6-Trichlorophenol | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 30-130 | 2 | 30 | |
| 2,4-Dichlorophenol | 2.16 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | 1 | 30 | |
| 2,4-Dimethylphenol | 3.06 | 0.250 | mg/kg wet | 2.500 | | 123 | 30-130 | 7 | 30 | |
| 2,4-Dinitrophenol | 2.67 | 1.00 | mg/kg wet | 2.500 | | 107 | 15-140 | 3 | 30 | |
| 2,4-Dinitrotoluene | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 0.6 | 30 | |
| 2,6-Dinitrotoluene | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 1 | 30 | |
| 2-Chloronaphthalene | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 0.9 | 30 | |
| 2-Chlorophenol | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 30-130 | 3 | 30 | |
| 2-Methylnaphthalene | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 2 | 30 | |
| 2-Methylphenol | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 15-140 | 0.2 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 24I0766

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DI42406 - 3546** | | | | | | | | | | |
| 2-Nitrophenol | 2.23 | 0.500 | mg/kg wet | 2.500 | | 89 | 30-130 | 2 | 30 | |
| 3,3´-Dichlorobenzidine | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 1 | 30 | |
| 3+4-Methylphenol | 5.18 | 0.250 | mg/kg wet | 5.000 | | 104 | 15-140 | 0.7 | 30 | |
| 4-Bromophenyl-phenylether | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 2 | 30 | |
| 4-Chloroaniline | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 15-140 | 4 | 30 | |
| 4-Nitrophenol | 2.61 | 1.00 | mg/kg wet | 2.500 | | 104 | 15-140 | 6 | 30 | |
| Acenaphthene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 0.1 | 30 | |
| Acenaphthylene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 0.08 | 30 | |
| Acetophenone | 2.41 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 2 | 30 | |
| Aniline | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 3 | 30 | |
| Anthracene | 2.59 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 3 | 30 | |
| Azobenzene | 2.79 | 0.250 | mg/kg wet | 2.500 | | 112 | 40-140 | 2 | 30 | |
| Benzo(a)anthracene | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 3 | 30 | |
| Benzo(a)pyrene | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 3 | 30 | |
| Benzo(b)fluoranthene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 4 | 30 | |
| Benzo(g,h,i)perylene | 2.72 | 0.250 | mg/kg wet | 2.500 | | 109 | 40-140 | 4 | 30 | |
| Benzo(k)fluoranthene | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 3 | 30 | |
| bis(2-Chloroethoxy)methane | 2.39 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 0.1 | 30 | |
| bis(2-Chloroethyl)ether | 2.50 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 2 | 30 | |
| bis(2-chloroisopropyl)Ether | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 3 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.82 | 0.250 | mg/kg wet | 2.500 | | 113 | 40-140 | 0.4 | 30 | |
| Butylbenzylphthalate | 2.95 | 0.250 | mg/kg wet | 2.500 | | 118 | 40-140 | 3 | 30 | |
| Chrysene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 2 | 30 | |
| Dibenzo(a,h)Anthracene | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | 3 | 30 | |
| Dibenzofuran | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 2 | 30 | |
| Diethylphthalate | 2.69 | 0.250 | mg/kg wet | 2.500 | | 108 | 40-140 | 0.9 | 30 | |
| Dimethylphthalate | 2.61 | 0.250 | mg/kg wet | 2.500 | | 105 | 15-140 | 0.3 | 30 | |
| Di-n-butylphthalate | 2.89 | 0.250 | mg/kg wet | 2.500 | | 115 | 40-140 | 3 | 30 | |
| Di-n-octylphthalate | 2.94 | 0.500 | mg/kg wet | 2.500 | | 118 | 40-140 | 0.3 | 30 | |
| Fluoranthene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 5 | 30 | |
| Fluorene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 1 | 30 | |
| Hexachlorobenzene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 2 | 30 | |
| Hexachlorobutadiene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 3 | 30 | |
| Hexachloroethane | 2.39 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 0.1 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 2 | 30 | |
| Isophorone | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 1 | 30 | |
| Naphthalene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 4 | 30 | |
| Nitrobenzene | 2.50 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 3 | 30 | |
| N-Nitrosodimethylamine | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 8 | 30 | |
| Pentachlorophenol | 2.01 | 1.00 | mg/kg wet | 2.500 | | 80 | 15-140 | 7 | 30 | |
| Phenanthrene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 3 | 30 | |
| Phenol | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 15-140 | 2 | 30 | |
| Pyrene | 2.75 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | 5 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.35* | | mg/kg wet | *2.500* | | *94* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.40* | | mg/kg wet | *3.750* | | *91* | *30-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 24I0766

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DI42406 - 3546** | | | | | | | | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.87* | | mg/kg wet | *3.750* | | *103* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.29* | | mg/kg wet | *2.500* | | *92* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.98* | | mg/kg wet | *3.750* | | *106* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.39* | | mg/kg wet | *2.500* | | *96* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *4.30* | | mg/kg wet | *3.750* | | *115* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.57* | | mg/kg wet | *2.500* | | *103* | *30-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 24I0766

**Notes and Definitions**

| | |
|---|---|
| U | Analyte included in the analysis, but not detected |
| S+ | Surrogate recovery(ies) above upper control limit (S+). |
| Q | Calibration required quadratic regression (Q). |
| D | Diluted. |
| CD+ | Continuing Calibration %Diff/Drift is above control limit (CD+). |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC - New Bedford ESS Laboratory Work Order: 24I0766

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 24I0766
Date Received: 9/23/2024
Project Due Date: 9/30/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 3.4 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No (NA)
10. Were any analyses received outside of hold time? Yes (No)

11. Any Subcontracting needed? Yes (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered — Yes / No To Be Lab Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 594520 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 594521 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 594522 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 4 | 594523 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 5 | 594524 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 6 | 594525 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 7 | 594526 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 8 | 594527 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 9 | 594528 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 10 | 594529 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 11 | 594530 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 12 | 594531 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**
**Were all containers scanned into storage/lab?** Initials
Are barcode labels on correct containers? (Yes) / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

ESS Project ID: 2410766

Date Received: 9/23/2024

Completed By: [signature] Date & Time: 9/23/24 1635

Reviewed By: [signature] Date & Time: 9/25/24 1037.

# CHAIN OF CUSTODY

ESS LABORATORY
185 Frances Avenue
Cranston, RI 02910
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

ESS Lab # 24J0766 | Page 1 of 2

Turn Time (Days) ☐>5 ☑5 ☐4 ☐3 ☐2 ☐1 ☐ Same Day

Regulatory State: MA Criteria: RCS-1

Is this project for any of the following?: ☐CT RCP ☑MA MCP ☐RGP ☐Permit ☐401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF): ☑ Limit Checker ☐ State Forms ☐ EQuIS; ☑ Excel ☐ Hard Copy ☐ Enviro Data; ☐ CLP-Like Package ☐ Other (Specify) →

## CLIENT INFORMATION

Client: MCEL
Address: 31 Bellows Rd
Raynham, MA 02767
Phone: 774-501-2176
Email Distribution List: cdalbello@cecinc.com jkitchen@cecinc.com

## PROJECT INFORMATION

Project Name: Mass CEC
Project Location: S. Front St. - New Bedford
Project Number: 332-344
Project Manager: Cassia Dal Bello
Bill to: client
PO#: 332-344
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

## REQUESTED ANALYSES

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | SVOCs | Total Number of Bottles |
|---|---|---|---|---|---|---|---|
| 1 | 9/19/24 | 1100 | Comp | Soil | CEC-15-4 0.6-4.6 | X | 1 |
| 2 | " " | 1300 | | | CEC-14-4 0.6-4.6 | X | 1 |
| 3 | 9/19/24 | 0730 | | | CEC-9-4 2-6 | X | 1 |
| 4 | | 0735 | | | CEC-9-4 6-8 | X | 1 |
| 5 | | 0800 | | | CEC-7-4 0-4 | X | 1 |
| 6 | | 0810 | | | CEC-7-4 5-10 | X | 1 |
| 7 | | 1000 | | | CEC-10-4 0-5 | X | 1 |
| 8 | | 1030 | | | CEC-8-4 0-4 | X | 1 |
| 9 | | 1045 | | | CEC-7-3 0-4 | X | 1 |
| 10 | | 1100 | | | CEC-6-3 0-4 | X | 1 |

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — J
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 9 — 10
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1

Sampled by: DGB

**Chain needs to be filled out neatly and completely for on time delivery.**

**Laboratory Use Only**
Cooler Temperature (°C): 3.4 / 1C

Comments: * Please specify "Other" preservative and containers types in this space

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration: ☐ Lab Filter

| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
|---|---|---|---|---|---|---|---|
| S. Goode | 9/23/2024 | 11:12 | 9/23/24 | | 9/23/24 | 16:00 | |
| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
| | | | | | | | |

ESS LABORATORY

185 Frances Avenue
Cranston, RI 02910
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 24I0766 | Page 2 of 2

Turn Time (Days) ☐ > 5 ☒ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day

Regulatory State: MA Criteria: RCS-1

Is this project for any of the following?:
☐ CT RCP ☒ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF)
☒ Limit Checker ☐ State Forms ☐ EQuIS
☒ Excel ☐ Hard Copy ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

## CLIENT INFORMATION

Client: MCEC
Address: 31 Bellows Rd
Raynham, MA 02767
Phone: 774-501-2176
Email Distribution List: cdalbello@cecinc.com jkitchen@cecinc.com

## PROJECT INFORMATION

Project Name: Mass CEC
Project Location: S. Front St. - New Bedford
Project Number: 332-344
Project Manager: Cassia Dal Bello
Bill to: client
PO#: 332-344
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

## REQUESTED ANALYSES

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | SVOCs | Total Number of Bottles |
|---|---|---|---|---|---|---|---|
| 11 | 9/19/24 | 1105 | Comp | Soil | CEC-63 5-7 | X | 1 |
| 12 | 9/19/24 | 1050 | " " | " " | CEC-DUP-9-19 | X | 1 |
| | | | | | | | |
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| | | | | | | | |

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — J
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 9
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1

Sampled by : DGB

**Chain needs to be filled out neatly and completely for on time delivery.**

**Laboratory Use Only**
Cooler Temperature (°C): 3.4 / 1a

**Comments:** * Please specify "Other" preservative and containers types in this space

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

**Dissolved Filtration**
☐ Lab Filter

| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
|---|---|---|---|---|---|---|---|
| [signature] | 9-23-2024 | 11:12 | [signature] 9/23/24 11:12 | [signature] | 9/23/24 | 15:59 | [signature] |
| Relinquished by (Signature) | Date | Time | Received by (Signature) | Relinquished by (Signature) | Date | Time | Received by (Signature) |
| | | | | | | | |

ESS Laboratory
DIVISION OF THE RISE GROUP
BAL Laboratory Analytical Balance

*CERTIFICATE OF ANALYSIS*

Cassia DalBello
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

**RE: MassCEC Phase III - Site 1 (332-344)**
**ESS Laboratory Work Order Number: 24I0819**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 6:36 pm, Oct 01, 2024**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0819

## SAMPLE RECEIPT

The following samples were received on September 24, 2024 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 24I0819-01 | CEC-8-3 2-4 | Soil | 8270E |
| 24I0819-02 | CEC-8-3 7-8 | Soil | 8270E, EPH8270, MADEP-EPH, MA-VPH-2.1 |
| 24I0819-03 | CEC-8-3 12-14.5 | Soil | 8270E, EPH8270, MADEP-EPH, MA-VPH-2.1 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0819

## PROJECT NARRATIVE

**MADEP-VPH Volatile Petroleum Hydrocarbon**

24I0819-02 **Surrogate recovery(ies) outside of criteria due to matrix (UCM/coelution/matrix is present) (SM).**
2,5-Dibromotoluene - FID (275% @ 70-130%), 2,5-Dibromotoluene - PID (140% @ 70-130%)

24I0819-03 **Surrogate recovery(ies) outside of criteria due to matrix (UCM/coelution/matrix is present) (SM).**
2,5-Dibromotoluene - FID (144% @ 70-130%)

**Semi-Volatile Organic Compounds**

24I0819-02 **Elevated Method Reporting Limits due to sample matrix (EL).**

D4I0504-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (126% @ 40-160%)

D4I0504-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4-Dimethylphenol (35% @ 20%), Aniline (46% @ 20%), bis(2-Chloroethyl)ether (20% @ 20%), Isophorone (22% @ 20%), Phenol-d6 (24% @ 20%)

D4I0570-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (87% @ 40-160%)

D4I0570-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4-Dimethylphenol (35% @ 20%), Aniline (25% @ 20%)

D4I0594-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (97% @ 40-160%)

D4I0594-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4-Dimethylphenol (30% @ 20%), Aniline (42% @ 20%), Azobenzene (22% @ 20%), Isophorone (24% @ 20%), Phenol-d6 (23% @ 20%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

***To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.***

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0819

## CURRENT SW-846 METHODOLOGY VERSIONS

### Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 19-2.1 - EPH
MADEP 18-2.1 - VPH

### Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0819

## MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **24I0819-01 through 24I0819-03**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

**CAM Protocol** (check all that apply below):

| | | | | | |
|---|---|---|---|---|---|
| ( ) 8260 VOC CAM II A | ( ) 7470/7471 Hg CAM III B | (x) MassDEP VPH (GC/PID/FID) CAM IV A | ( ) 8082 PCB CAM V A | ( ) 9014 Total Cyanide/PAC CAM VI A | ( ) 6860 Perchlorate CAM VIII B |
| (x) 8270 SVOC CAM II B | ( ) 7010 Metals CAM III C | ( ) MassDEP VPH (GC/MS) CAM IV C | ( ) 8081 Pesticides CAM V B | ( ) 7196 Hex Cr CAM VI B | ( ) MassDEP APH CAM IX A |
| ( ) 6010 Metals CAM III A | ( ) 6020 Metals CAM III D | (x) MassDEP EPH CAM IV B | ( ) 8151 Herbicides CAM V C | ( ) Explosives CAM VIII A | ( ) TO-15 VOC CAM IX B |

***Affirmative responses to questions A through F are required for "Presumptive Certainty" status***

| | | |
|---|---|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (x) No ( ) |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (x) No ( ) |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (x) No ( ) |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (x) No ( ) |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). | Yes (x) No ( ) |
| | b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes ( ) No ( ) |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (x) No ( ) |

***Responses to Questions G, H and I below are required for '"Presumptive Certainty" status***

| | | |
|---|---|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? ***Data User Note:*** ***Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*** | Yes ( ) No (x)* |
| H | Were **all** QC performance standards specified in the CAM protocol(s) achieved? | Yes ( ) No (x)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (x) No ( )* |

****All negative responses must be addressed in an attached laboratory narrative.***

***I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.***

Signature: _____ Date: October 01, 2024
Printed Name: Laurel Stoddard Position: Laboratory Director

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CEC-8-3 2-4
Date Sampled: 09/23/24 11:45
Percent Solids: 87
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0819
ESS Laboratory Sample ID: 24I0819-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 17:22

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.029) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 1,2,4-Trichlorobenzene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 1,2-Dichlorobenzene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 1,3-Dichlorobenzene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 1,4-Dichlorobenzene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 2,4,5-Trichlorophenol | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 2,4,6-Trichlorophenol | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 2,4-Dichlorophenol | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 2,4-Dimethylphenol | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 2,4-Dinitrophenol | ND (1.17) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 2,4-Dinitrotoluene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 2,6-Dinitrotoluene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 2-Chloronaphthalene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 2-Chlorophenol | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| **2-Methylnaphthalene** | **4.47** (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 2-Methylphenol | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 2-Nitrophenol | ND (0.583) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 3,3′-Dichlorobenzidine | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 3+4-Methylphenol | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 4-Bromophenyl-phenylether | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 4-Chloroaniline | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| 4-Nitrophenol | ND (1.17) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| **Acenaphthene** | **0.536** (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Acenaphthylene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Acetophenone | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Aniline | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Anthracene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CEC-8-3 2-4
Date Sampled: 09/23/24 11:45
Percent Solids: 87
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0819
ESS Laboratory Sample ID: 24I0819-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 17:22

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Benzo(a)anthracene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Benzo(a)pyrene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Benzo(b)fluoranthene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Benzo(g,h,i)perylene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Benzo(k)fluoranthene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| bis(2-Chloroethoxy)methane | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| bis(2-Chloroethyl)ether | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| bis(2-chloroisopropyl)Ether | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| bis(2-Ethylhexyl)phthalate | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Butylbenzylphthalate | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Chrysene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Dibenzo(a,h)Anthracene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Dibenzofuran | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Diethylphthalate | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Dimethylphthalate | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Di-n-butylphthalate | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Di-n-octylphthalate | ND (0.583) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Fluoranthene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| **Fluorene** | **0.565** (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Hexachlorobenzene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Hexachlorobutadiene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Hexachloroethane | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Indeno(1,2,3-cd)Pyrene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Isophorone | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Naphthalene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Nitrobenzene | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CEC-8-3 2-4
Date Sampled: 09/23/24 11:45
Percent Solids: 87
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0819
ESS Laboratory Sample ID: 24I0819-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 17:22

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Pentachlorophenol | ND (1.17) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| **Phenanthrene** | **1.21** (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| Phenol | ND (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |
| **Pyrene** | **0.334** (0.292) | --- | 8270E | --- | 1 | NXL | 09/27/24 15:38 | D4I0594 | DI42406 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *91 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *41 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *71 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *81 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *48 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *111 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *93 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *91 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CEC-8-3 7-8
Date Sampled: 09/23/24 12:00
Percent Solids: 83
Initial Volume: 17g
Final Volume: 15ml
Extraction Method: 5035
Column Type: Restek RTX-502.2 - 3µ film thickness 0.53mm X 105m

ESS Laboratory Work Order: 24I0819
ESS Laboratory Sample ID: 24I0819-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Trap Type: Supelco K Vocarb 3000 Trap

## MADEP-VPH Volatile Petroleum Hydrocarbon

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **C9-C10 Aromatics** | **155** (12.6) | --- | MA-VPH-2.1 | --- | 1 | 09/25/24 14:28 | D4I0519 | DI42615 |
| C5-C8 Aliphatics1,2 | ND (13.2) | --- | MA-VPH-2.1 | --- | 1 | 09/25/24 14:28 | --- | [CALC] |
| **C9-C12 Aliphatics2,3** | **140** (26.2) | --- | MA-VPH-2.1 | --- | 1 | 09/25/24 14:28 | --- | [CALC] |
| Benzene | ND (0.25) | --- | MA-VPH-2.1 | --- | 1 | 09/25/24 14:28 | D4I0519 | DI42615 |
| Ethylbenzene | ND (0.25) | --- | MA-VPH-2.1 | --- | 1 | 09/25/24 14:28 | D4I0519 | DI42615 |
| Methyl tert-Butyl Ether | ND (0.06) | --- | MA-VPH-2.1 | --- | 1 | 09/25/24 14:28 | D4I0519 | DI42615 |
| Naphthalene | ND (0.25) | --- | MA-VPH-2.1 | --- | 1 | 09/25/24 14:28 | D4I0519 | DI42615 |
| Toluene | ND (0.25) | --- | MA-VPH-2.1 | --- | 1 | 09/25/24 14:28 | D4I0519 | DI42615 |
| **Xylene O** | **1.17** (0.25) | --- | MA-VPH-2.1 | --- | 1 | 09/25/24 14:28 | D4I0519 | DI42615 |
| Xylene P,M | ND (0.50) | --- | MA-VPH-2.1 | --- | 1 | 09/25/24 14:28 | D4I0519 | DI42615 |
| **1:1 Methanol/Soil Ratio %D** | **13** (N/A) | | MA-VPH-2.1 | | | 09/25/24 8:00 | | DI42615 |
| **Preservative:** | **MeOH - covered** | | MA-VPH-2.1 | | | | | DI42615 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 2,5-Dibromotoluene - FID* | *275 %* | *SM* | *70-130* |
| *Surrogate: 2,5-Dibromotoluene - PID* | *140 %* | *SM* | *70-130* |
| *Surrogate: Trifluorotoluene - FID* | *107 %* | | *70-130* |
| *Surrogate: Trifluorotoluene - PID* | *108 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CEC-8-3 7-8
Date Sampled: 09/23/24 12:00
Percent Solids: 83
Initial Volume: 10.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0819
ESS Laboratory Sample ID: 24I0819-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 17:22

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.058) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 1,2,4-Trichlorobenzene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 1,2-Dichlorobenzene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 1,3-Dichlorobenzene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 1,4-Dichlorobenzene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 2,4,5-Trichlorophenol | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 2,4,6-Trichlorophenol | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 2,4-Dichlorophenol | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 2,4-Dimethylphenol | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 2,4-Dinitrophenol | ND (2.31) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| **2,4-Dinitrotoluene** | **1.13** (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 2,6-Dinitrotoluene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 2-Chloronaphthalene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 2-Chlorophenol | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 2-Methylnaphthalene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 2-Methylphenol | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 2-Nitrophenol | ND (1.15) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 3,3´-Dichlorobenzidine | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 3+4-Methylphenol | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 4-Bromophenyl-phenylether | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 4-Chloroaniline | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| 4-Nitrophenol | ND (2.31) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| **Acenaphthene** | **1.31** (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Acenaphthylene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Acetophenone | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Aniline | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Anthracene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CEC-8-3 7-8
Date Sampled: 09/23/24 12:00
Percent Solids: 83
Initial Volume: 10.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0819
ESS Laboratory Sample ID: 24I0819-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 17:22

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Benzo(a)anthracene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Benzo(a)pyrene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Benzo(b)fluoranthene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Benzo(g,h,i)perylene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Benzo(k)fluoranthene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| bis(2-Chloroethoxy)methane | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| bis(2-Chloroethyl)ether | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| bis(2-chloroisopropyl)Ether | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| bis(2-Ethylhexyl)phthalate | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Butylbenzylphthalate | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Chrysene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Dibenzo(a,h)Anthracene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| **Dibenzofuran** | **0.633** (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Diethylphthalate | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Dimethylphthalate | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Di-n-butylphthalate | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Di-n-octylphthalate | ND (1.15) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Fluoranthene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| **Fluorene** | **1.55** (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Hexachlorobenzene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Hexachlorobutadiene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Hexachloroethane | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Indeno(1,2,3-cd)Pyrene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Isophorone | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Naphthalene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Nitrobenzene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CEC-8-3 7-8
Date Sampled: 09/23/24 12:00
Percent Solids: 83
Initial Volume: 10.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0819
ESS Laboratory Sample ID: 24I0819-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 17:22

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Pentachlorophenol | ND (2.31) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| **Phenanthrene** | **3.06** (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Phenol | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |
| Pyrene | ND (0.577) | --- | 8270E | --- | 1 | NXL | 09/25/24 16:15 | D4I0570 | DI42406 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *86 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *100 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *95 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *80 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *94 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *90 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *98 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *93 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CEC-8-3 7-8
Date Sampled: 09/23/24 12:00
Percent Solids: 83
Initial Volume: 25.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0819
ESS Laboratory Sample ID: 24I0819-02
Sample Matrix: Soil
Units: mg/kg dry

Prepared: 9/25/24 9:45

## MADEP-EPH Extractable Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **C9-C18 Aliphatics1** | **649** (17.9) | --- | MADEP-EPH | --- | 1 | JDN | 09/25/24 21:39 | D4I0501 | DI42504 |
| **C19-C36 Aliphatics1** | **85.6** (17.9) | --- | MADEP-EPH | --- | 1 | JDN | 09/25/24 21:39 | D4I0501 | DI42504 |
| **C11-C22 Unadjusted Aromatics1** | **347** (17.9) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 13:29 | D4I0587 | DI42504 |
| **C11-C22 Aromatics1,2** | **344** (17.9) | --- | EPH8270 | --- | | NXL | 09/30/24 13:29 | --- | [CALC] |
| 2-Methylnaphthalene | ND (0.24) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 13:29 | D4I0587 | DI42504 |
| Acenaphthene | ND (0.48) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 13:29 | D4I0587 | DI42504 |
| Naphthalene | ND (0.48) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 13:29 | D4I0587 | DI42504 |
| **Phenanthrene** | **1.71** (0.48) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 13:29 | D4I0587 | DI42504 |
| Acenaphthylene | ND (0.24) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 13:29 | D4I0587 | DI42504 |
| Anthracene | ND (0.48) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 13:29 | D4I0587 | DI42504 |
| Benzo(a)anthracene | ND (0.48) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 13:29 | D4I0587 | DI42504 |
| Benzo(a)pyrene | ND (0.48) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 13:29 | D4I0587 | DI42504 |
| Benzo(b)fluoranthene | ND (0.48) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 13:29 | D4I0587 | DI42504 |
| Benzo(g,h,i)perylene | ND (0.48) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 13:29 | D4I0587 | DI42504 |
| Benzo(k)fluoranthene | ND (0.48) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 13:29 | D4I0587 | DI42504 |
| Chrysene | ND (0.48) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 13:29 | D4I0587 | DI42504 |
| Dibenzo(a,h)Anthracene | ND (0.24) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 13:29 | D4I0587 | DI42504 |
| Fluoranthene | ND (0.48) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 13:29 | D4I0587 | DI42504 |
| **Fluorene** | **0.84** (0.48) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 13:29 | D4I0587 | DI42504 |
| Indeno(1,2,3-cd)Pyrene | ND (0.48) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 13:29 | D4I0587 | DI42504 |
| Pyrene | ND (0.48) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 13:29 | D4I0587 | DI42504 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1-Chlorooctadecane* | *73 %* | | *40-140* |
| *Surrogate: 2-Bromonaphthalene* | *97 %* | | *40-140* |
| *Surrogate: 2-Fluorobiphenyl* | *88 %* | | *40-140* |
| *Surrogate: O-Terphenyl* | *66 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CEC-8-3 12-14.5
Date Sampled: 09/23/24 12:25
Percent Solids: 90
Initial Volume: 15.1g
Final Volume: 15ml
Extraction Method: 5035
Column Type: Restek RTX-502.2 - 3µ film thickness 0.53mm X 105m

ESS Laboratory Work Order: 24I0819
ESS Laboratory Sample ID: 24I0819-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Trap Type: Supelco K Vocarb 3000 Trap

## MADEP-VPH Volatile Petroleum Hydrocarbon

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| **C9-C10 Aromatics** | **48.0** (12.2) | --- | MA-VPH-2.1 | --- | 1 | 09/26/24 12:22 | D4I0569 | DI42721 |
| C5-C8 Aliphatics1,2 | ND (12.7) | --- | MA-VPH-2.1 | --- | 1 | 09/26/24 12:22 | --- | [CALC] |
| **C9-C12 Aliphatics2,3** | **42.8** (25.3) | --- | MA-VPH-2.1 | --- | 1 | 09/26/24 12:22 | --- | [CALC] |
| Benzene | ND (0.24) | --- | MA-VPH-2.1 | --- | 1 | 09/26/24 12:22 | D4I0569 | DI42721 |
| Ethylbenzene | ND (0.24) | --- | MA-VPH-2.1 | --- | 1 | 09/26/24 12:22 | D4I0569 | DI42721 |
| Methyl tert-Butyl Ether | ND (0.06) | --- | MA-VPH-2.1 | --- | 1 | 09/26/24 12:22 | D4I0569 | DI42721 |
| Naphthalene | ND (0.24) | --- | MA-VPH-2.1 | --- | 1 | 09/26/24 12:22 | D4I0569 | DI42721 |
| Toluene | ND (0.24) | --- | MA-VPH-2.1 | --- | 1 | 09/26/24 12:22 | D4I0569 | DI42721 |
| **Xylene O** | **0.31** (0.24) | --- | MA-VPH-2.1 | --- | 1 | 09/26/24 12:22 | D4I0569 | DI42721 |
| Xylene P,M | ND (0.49) | --- | MA-VPH-2.1 | --- | 1 | 09/26/24 12:22 | D4I0569 | DI42721 |
| **1:1 Methanol/Soil Ratio %D** | **0.7** (N/A) | | MA-VPH-2.1 | | | 09/26/24 8:00 | | DI42721 |
| **Preservative:** | **MeOH - covered** | | MA-VPH-2.1 | | | | | DI42721 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 2,5-Dibromotoluene - FID* | *144 %* | *SM* | *70-130* |
| *Surrogate: 2,5-Dibromotoluene - PID* | *108 %* | | *70-130* |
| *Surrogate: Trifluorotoluene - FID* | *98 %* | | *70-130* |
| *Surrogate: Trifluorotoluene - PID* | *97 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CEC-8-3 12-14.5
Date Sampled: 09/23/24 12:25
Percent Solids: 90
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0819
ESS Laboratory Sample ID: 24I0819-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 17:22

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl | ND (0.027) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 1,2,4-Trichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 1,2-Dichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 1,3-Dichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 1,4-Dichlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 2,4,5-Trichlorophenol | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 2,4,6-Trichlorophenol | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 2,4-Dichlorophenol | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 2,4-Dimethylphenol | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 2,4-Dinitrophenol | ND (1.09) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 2,4-Dinitrotoluene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 2,6-Dinitrotoluene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 2-Chloronaphthalene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 2-Chlorophenol | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 2-Methylnaphthalene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 2-Methylphenol | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 2-Nitrophenol | ND (0.545) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 3,3´-Dichlorobenzidine | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 3+4-Methylphenol | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 4-Bromophenyl-phenylether | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 4-Chloroaniline | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| 4-Nitrophenol | ND (1.09) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Acenaphthene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Acenaphthylene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Acetophenone | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Aniline | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Anthracene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CEC-8-3 12-14.5
Date Sampled: 09/23/24 12:25
Percent Solids: 90
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0819
ESS Laboratory Sample ID: 24I0819-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 17:22

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| Azobenzene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Benzo(a)anthracene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Benzo(a)pyrene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Benzo(b)fluoranthene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Benzo(g,h,i)perylene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Benzo(k)fluoranthene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| bis(2-Chloroethoxy)methane | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| bis(2-Chloroethyl)ether | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| bis(2-chloroisopropyl)Ether | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| bis(2-Ethylhexyl)phthalate | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Butylbenzylphthalate | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Chrysene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Dibenzo(a,h)Anthracene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Dibenzofuran | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Diethylphthalate | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Dimethylphthalate | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Di-n-butylphthalate | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Di-n-octylphthalate | ND (0.545) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Fluoranthene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Fluorene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Hexachlorobenzene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Hexachlorobutadiene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Hexachloroethane | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Indeno(1,2,3-cd)Pyrene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Isophorone | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Naphthalene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Nitrobenzene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CEC-8-3 12-14.5
Date Sampled: 09/23/24 12:25
Percent Solids: 90
Initial Volume: 20.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0819
ESS Laboratory Sample ID: 24I0819-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: NXL
Prepared: 9/24/24 17:22

## Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Pentachlorophenol | ND (1.09) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Phenanthrene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Phenol | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |
| Pyrene | ND (0.273) | --- | 8270E | --- | 1 | NXL | 09/27/24 16:08 | D4I0594 | DI42406 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *99 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *95 %* | | *30-130* |
| *Surrogate: 2-Chlorophenol-d4* | *102 %* | | *30-130* |
| *Surrogate: 2-Fluorobiphenyl* | *93 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *111 %* | | *30-130* |
| *Surrogate: Nitrobenzene-d5* | *99 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *118 %* | | *30-130* |
| *Surrogate: p-Terphenyl-d14* | *95 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1
Client Sample ID: CEC-8-3 12-14.5
Date Sampled: 09/23/24 12:25
Percent Solids: 90
Initial Volume: 25.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24I0819
ESS Laboratory Sample ID: 24I0819-03
Sample Matrix: Soil
Units: mg/kg dry

Prepared: 9/25/24 9:45

## MADEP-EPH Extractable Petroleum Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **C9-C18 Aliphatics1** | **262** (16.1) | --- | MADEP-EPH | --- | 1 | JDN | 09/25/24 22:14 | D4I0501 | DI42504 |
| **C19-C36 Aliphatics1** | **39.7** (16.1) | --- | MADEP-EPH | --- | 1 | JDN | 09/25/24 22:14 | D4I0501 | DI42504 |
| **C11-C22 Unadjusted Aromatics1** | **163** (16.1) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 14:49 | D4I0587 | DI42504 |
| **C11-C22 Aromatics1,2** | **158** (16.1) | --- | EPH8270 | --- | | NXL | 09/30/24 14:49 | --- | [CALC] |
| **2-Methylnaphthalene** | **3.62** (0.21) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 14:49 | D4I0587 | DI42504 |
| Acenaphthene | ND (0.43) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 14:49 | D4I0587 | DI42504 |
| Naphthalene | ND (0.43) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 14:49 | D4I0587 | DI42504 |
| **Phenanthrene** | **0.94** (0.43) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 14:49 | D4I0587 | DI42504 |
| Acenaphthylene | ND (0.21) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 14:49 | D4I0587 | DI42504 |
| Anthracene | ND (0.43) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 14:49 | D4I0587 | DI42504 |
| Benzo(a)anthracene | ND (0.43) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 14:49 | D4I0587 | DI42504 |
| Benzo(a)pyrene | ND (0.43) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 14:49 | D4I0587 | DI42504 |
| Benzo(b)fluoranthene | ND (0.43) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 14:49 | D4I0587 | DI42504 |
| Benzo(g,h,i)perylene | ND (0.43) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 14:49 | D4I0587 | DI42504 |
| Benzo(k)fluoranthene | ND (0.43) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 14:49 | D4I0587 | DI42504 |
| Chrysene | ND (0.43) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 14:49 | D4I0587 | DI42504 |
| Dibenzo(a,h)Anthracene | ND (0.21) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 14:49 | D4I0587 | DI42504 |
| Fluoranthene | ND (0.43) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 14:49 | D4I0587 | DI42504 |
| Fluorene | ND (0.43) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 14:49 | D4I0587 | DI42504 |
| Indeno(1,2,3-cd)Pyrene | ND (0.43) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 14:49 | D4I0587 | DI42504 |
| Pyrene | ND (0.43) | --- | EPH8270 | --- | 1 | NXL | 09/30/24 14:49 | D4I0587 | DI42504 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1-Chlorooctadecane* | *76 %* | | *40-140* |
| *Surrogate: 2-Bromonaphthalene* | *112 %* | | *40-140* |
| *Surrogate: 2-Fluorobiphenyl* | *102 %* | | *40-140* |
| *Surrogate: O-Terphenyl* | *84 %* | | *40-140* |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0819

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| MADEP-VPH Volatile Petroleum Hydrocarbon | | | | | | | | | | |
| **Batch DI42615 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Benzene | ND | 0.20 | mg/kg wet | | | | | | | |
| C5-C8 Unadjusted Aliphatics | ND | 10.0 | mg/kg wet | | | | | | | |
| C9-C10 Aromatics | ND | 10.0 | mg/kg wet | | | | | | | |
| C9-C12 Unadjusted Aliphatics | ND | 10.0 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.20 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.05 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.20 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.20 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.20 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.40 | mg/kg wet | | | | | | | |
| *Surrogate: 2,5-Dibromotoluene - FID* | *4.60* | | mg/kg wet | *5.000* | | *92* | *70-130* | | | |
| *Surrogate: 2,5-Dibromotoluene - PID* | *4.72* | | mg/kg wet | *5.000* | | *94* | *70-130* | | | |
| *Surrogate: Trifluorotoluene - FID* | *5.04* | | mg/kg wet | *5.333* | | *95* | *70-130* | | | |
| *Surrogate: Trifluorotoluene - PID* | *5.07* | | mg/kg wet | *5.333* | | *95* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| Benzene | 5.50 | 0.20 | mg/kg wet | 5.000 | | 110 | 70-130 | | | |
| C5-C8 Unadjusted Aliphatics | 48.1 | 10.0 | mg/kg wet | 40.00 | | 120 | 70-130 | | | |
| C9-C10 Aromatics | 10.1 | 10.0 | mg/kg wet | 10.00 | | 101 | 70-130 | | | |
| C9-C12 Unadjusted Aliphatics | 23.5 | 10.0 | mg/kg wet | 30.00 | | 78 | 70-130 | | | |
| Ethylbenzene | 5.26 | 0.20 | mg/kg wet | 5.000 | | 105 | 70-130 | | | |
| Methyl tert-Butyl Ether | 14.7 | 0.05 | mg/kg wet | 15.00 | | 98 | 70-130 | | | |
| Naphthalene | 9.38 | 0.20 | mg/kg wet | 10.00 | | 94 | 70-130 | | | |
| Toluene | 15.4 | 0.20 | mg/kg wet | 15.00 | | 103 | 70-130 | | | |
| Xylene O | 10.1 | 0.20 | mg/kg wet | 10.00 | | 101 | 70-130 | | | |
| Xylene P,M | 20.4 | 0.40 | mg/kg wet | 20.00 | | 102 | 70-130 | | | |
| *Surrogate: 2,5-Dibromotoluene - FID* | *4.20* | | mg/kg wet | *5.000* | | *84* | *70-130* | | | |
| *Surrogate: 2,5-Dibromotoluene - PID* | *4.60* | | mg/kg wet | *5.000* | | *92* | *70-130* | | | |
| *Surrogate: Trifluorotoluene - FID* | *5.45* | | mg/kg wet | *5.333* | | *102* | *70-130* | | | |
| *Surrogate: Trifluorotoluene - PID* | *5.78* | | mg/kg wet | *5.333* | | *108* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| Benzene | 5.39 | 0.20 | mg/kg wet | 5.000 | | 108 | 70-130 | 2 | 25 | |
| C5-C8 Unadjusted Aliphatics | 46.4 | 10.0 | mg/kg wet | 40.00 | | 116 | 70-130 | 4 | 25 | |
| C9-C10 Aromatics | 10.6 | 10.0 | mg/kg wet | 10.00 | | 106 | 70-130 | 5 | 25 | |
| C9-C12 Unadjusted Aliphatics | 24.6 | 10.0 | mg/kg wet | 30.00 | | 82 | 70-130 | 5 | 25 | |
| Ethylbenzene | 5.35 | 0.20 | mg/kg wet | 5.000 | | 107 | 70-130 | 2 | 25 | |
| Methyl tert-Butyl Ether | 14.7 | 0.05 | mg/kg wet | 15.00 | | 98 | 70-130 | 0.1 | 25 | |
| Naphthalene | 9.92 | 0.20 | mg/kg wet | 10.00 | | 99 | 70-130 | 6 | 25 | |
| Toluene | 15.4 | 0.20 | mg/kg wet | 15.00 | | 102 | 70-130 | 0.06 | 25 | |
| Xylene O | 10.5 | 0.20 | mg/kg wet | 10.00 | | 105 | 70-130 | 3 | 25 | |
| Xylene P,M | 20.9 | 0.40 | mg/kg wet | 20.00 | | 105 | 70-130 | 2 | 25 | |
| *Surrogate: 2,5-Dibromotoluene - FID* | *4.49* | | mg/kg wet | *5.000* | | *90* | *70-130* | | | |
| *Surrogate: 2,5-Dibromotoluene - PID* | *4.81* | | mg/kg wet | *5.000* | | *96* | *70-130* | | | |
| *Surrogate: Trifluorotoluene - FID* | *5.40* | | mg/kg wet | *5.333* | | *101* | *70-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0819

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| MADEP-VPH Volatile Petroleum Hydrocarbon | | | | | | | | | | |
| **Batch DI42615 - 5035** | | | | | | | | | | |
| *Surrogate: Trifluorotoluene - PID* | *5.64* | | mg/kg wet | *5.333* | | *106* | *70-130* | | | |
| **Batch DI42721 - 5035** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Benzene | ND | 0.20 | mg/kg wet | | | | | | | |
| C5-C8 Unadjusted Aliphatics | ND | 10.0 | mg/kg wet | | | | | | | |
| C9-C10 Aromatics | ND | 10.0 | mg/kg wet | | | | | | | |
| C9-C12 Unadjusted Aliphatics | ND | 10.0 | mg/kg wet | | | | | | | |
| Ethylbenzene | ND | 0.20 | mg/kg wet | | | | | | | |
| Methyl tert-Butyl Ether | ND | 0.05 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.20 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.20 | mg/kg wet | | | | | | | |
| Xylene O | ND | 0.20 | mg/kg wet | | | | | | | |
| Xylene P,M | ND | 0.40 | mg/kg wet | | | | | | | |
| *Surrogate: 2,5-Dibromotoluene - FID* | *4.70* | | mg/kg wet | *5.000* | | *94* | *70-130* | | | |
| *Surrogate: 2,5-Dibromotoluene - PID* | *4.60* | | mg/kg wet | *5.000* | | *92* | *70-130* | | | |
| *Surrogate: Trifluorotoluene - FID* | *4.99* | | mg/kg wet | *5.333* | | *93* | *70-130* | | | |
| *Surrogate: Trifluorotoluene - PID* | *5.01* | | mg/kg wet | *5.333* | | *94* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| Benzene | 5.43 | 0.20 | mg/kg wet | 5.000 | | 109 | 70-130 | | | |
| C5-C8 Unadjusted Aliphatics | 46.5 | 10.0 | mg/kg wet | 40.00 | | 116 | 70-130 | | | |
| C9-C10 Aromatics | 9.98 | 10.0 | mg/kg wet | 10.00 | | 100 | 70-130 | | | |
| C9-C12 Unadjusted Aliphatics | 24.1 | 10.0 | mg/kg wet | 30.00 | | 80 | 70-130 | | | |
| Ethylbenzene | 5.20 | 0.20 | mg/kg wet | 5.000 | | 104 | 70-130 | | | |
| Methyl tert-Butyl Ether | 14.9 | 0.05 | mg/kg wet | 15.00 | | 99 | 70-130 | | | |
| Naphthalene | 9.61 | 0.20 | mg/kg wet | 10.00 | | 96 | 70-130 | | | |
| Toluene | 15.2 | 0.20 | mg/kg wet | 15.00 | | 101 | 70-130 | | | |
| Xylene O | 10.0 | 0.20 | mg/kg wet | 10.00 | | 100 | 70-130 | | | |
| Xylene P,M | 20.1 | 0.40 | mg/kg wet | 20.00 | | 101 | 70-130 | | | |
| *Surrogate: 2,5-Dibromotoluene - FID* | *4.49* | | mg/kg wet | *5.000* | | *90* | *70-130* | | | |
| *Surrogate: 2,5-Dibromotoluene - PID* | *4.72* | | mg/kg wet | *5.000* | | *94* | *70-130* | | | |
| *Surrogate: Trifluorotoluene - FID* | *5.35* | | mg/kg wet | *5.333* | | *100* | *70-130* | | | |
| *Surrogate: Trifluorotoluene - PID* | *5.64* | | mg/kg wet | *5.333* | | *106* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| Benzene | 5.25 | 0.20 | mg/kg wet | 5.000 | | 105 | 70-130 | 3 | 25 | |
| C5-C8 Unadjusted Aliphatics | 43.8 | 10.0 | mg/kg wet | 40.00 | | 109 | 70-130 | 6 | 25 | |
| C9-C10 Aromatics | 10.4 | 10.0 | mg/kg wet | 10.00 | | 104 | 70-130 | 4 | 25 | |
| C9-C12 Unadjusted Aliphatics | 25.2 | 10.0 | mg/kg wet | 30.00 | | 84 | 70-130 | 4 | 25 | |
| Ethylbenzene | 5.22 | 0.20 | mg/kg wet | 5.000 | | 104 | 70-130 | 0.3 | 25 | |
| Methyl tert-Butyl Ether | 14.7 | 0.05 | mg/kg wet | 15.00 | | 98 | 70-130 | 1 | 25 | |
| Naphthalene | 10.1 | 0.20 | mg/kg wet | 10.00 | | 101 | 70-130 | 5 | 25 | |
| Toluene | 15.0 | 0.20 | mg/kg wet | 15.00 | | 100 | 70-130 | 1 | 25 | |
| Xylene O | 10.2 | 0.20 | mg/kg wet | 10.00 | | 102 | 70-130 | 2 | 25 | |
| Xylene P,M | 20.4 | 0.40 | mg/kg wet | 20.00 | | 102 | 70-130 | 1 | 25 | |
| *Surrogate: 2,5-Dibromotoluene - FID* | *4.61* | | mg/kg wet | *5.000* | | *92* | *70-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0819

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **MADEP-VPH Volatile Petroleum Hydrocarbon** | | | | | | | | | | |
| **Batch DI42721 - 5035** | | | | | | | | | | |
| *Surrogate: 2,5-Dibromotoluene - PID* | *4.77* | | mg/kg wet | *5.000* | | *95* | *70-130* | | | |
| *Surrogate: Trifluorotoluene - FID* | *5.28* | | mg/kg wet | *5.333* | | *99* | *70-130* | | | |
| *Surrogate: Trifluorotoluene - PID* | *5.49* | | mg/kg wet | *5.333* | | *103* | *70-130* | | | |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DI42406 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1-Biphenyl | ND | 0.025 | mg/kg wet | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dichlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dimethylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,4-Dinitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| 2,4-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2,6-Dinitrotoluene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chloronaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Chlorophenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylnaphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 2-Nitrophenol | ND | 0.500 | mg/kg wet | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 0.250 | mg/kg wet | | | | | | | |
| 3+4-Methylphenol | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Chloroaniline | ND | 0.250 | mg/kg wet | | | | | | | |
| 4-Nitrophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Acetophenone | ND | 0.250 | mg/kg wet | | | | | | | |
| Aniline | ND | 0.250 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Azobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.250 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 0.250 | mg/kg wet | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Butylbenzylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0819

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DI42406 - 3546** | | | | | | | | | | |
| Chrysene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.250 | mg/kg wet | | | | | | | |
| Dibenzofuran | ND | 0.250 | mg/kg wet | | | | | | | |
| Diethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Dimethylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-butylphthalate | ND | 0.250 | mg/kg wet | | | | | | | |
| Di-n-octylphthalate | ND | 0.500 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.250 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachlorobutadiene | ND | 0.250 | mg/kg wet | | | | | | | |
| Hexachloroethane | ND | 0.250 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Isophorone | ND | 0.250 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.250 | mg/kg wet | | | | | | | |
| Nitrobenzene | ND | 0.250 | mg/kg wet | | | | | | | |
| N-Nitrosodimethylamine | ND | 0.250 | mg/kg wet | | | | | | | |
| Pentachlorophenol | ND | 1.00 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.250 | mg/kg wet | | | | | | | |
| Phenol | ND | 0.250 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.250 | mg/kg wet | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.44* | | mg/kg wet | *2.500* | | *98* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.28* | | mg/kg wet | *3.750* | | *87* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.91* | | mg/kg wet | *3.750* | | *104* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.25* | | mg/kg wet | *2.500* | | *90* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *4.22* | | mg/kg wet | *3.750* | | *113* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.58* | | mg/kg wet | *2.500* | | *103* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *4.43* | | mg/kg wet | *3.750* | | *118* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.62* | | mg/kg wet | *2.500* | | *105* | *30-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1-Biphenyl | 2.25 | 0.025 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| 1,2,4-Trichlorobenzene | 2.14 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| 1,2-Dichlorobenzene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| 1,3-Dichlorobenzene | 2.24 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| 1,4-Dichlorobenzene | 2.24 | 0.250 | mg/kg wet | 2.500 | | 89 | 40-140 | | | |
| 2,4,5-Trichlorophenol | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 30-130 | | | |
| 2,4,6-Trichlorophenol | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 30-130 | | | |
| 2,4-Dichlorophenol | 2.14 | 0.250 | mg/kg wet | 2.500 | | 86 | 30-130 | | | |
| 2,4-Dimethylphenol | 2.85 | 0.250 | mg/kg wet | 2.500 | | 114 | 30-130 | | | |
| 2,4-Dinitrophenol | 2.59 | 1.00 | mg/kg wet | 2.500 | | 104 | 15-140 | | | |
| 2,4-Dinitrotoluene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| 2,6-Dinitrotoluene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| 2-Chloronaphthalene | 2.27 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| 2-Chlorophenol | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 30-130 | | | |
| 2-Methylnaphthalene | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0819

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DI42406 - 3546** | | | | | | | | | | |
| 2-Methylphenol | 2.37 | 0.250 | mg/kg wet | 2.500 | | 95 | 15-140 | | | |
| 2-Nitrophenol | 2.19 | 0.500 | mg/kg wet | 2.500 | | 88 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| 3+4-Methylphenol | 5.14 | 0.250 | mg/kg wet | 5.000 | | 103 | 15-140 | | | |
| 4-Bromophenyl-phenylether | 2.42 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| 4-Chloroaniline | 2.03 | 0.250 | mg/kg wet | 2.500 | | 81 | 15-140 | | | |
| 4-Nitrophenol | 2.46 | 1.00 | mg/kg wet | 2.500 | | 98 | 15-140 | | | |
| Acenaphthene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Acenaphthylene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| Acetophenone | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| Aniline | 1.94 | 0.250 | mg/kg wet | 2.500 | | 78 | 40-140 | | | |
| Anthracene | 2.50 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | | | |
| Azobenzene | 2.74 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | | | |
| Benzo(a)anthracene | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Benzo(a)pyrene | 2.53 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.28 | 0.250 | mg/kg wet | 2.500 | | 91 | 40-140 | | | |
| Benzo(g,h,i)perylene | 2.60 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| bis(2-Chloroethoxy)methane | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| bis(2-Chloroethyl)ether | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 2.11 | 0.250 | mg/kg wet | 2.500 | | 84 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 2.80 | 0.250 | mg/kg wet | 2.500 | | 112 | 40-140 | | | |
| Butylbenzylphthalate | 2.88 | 0.250 | mg/kg wet | 2.500 | | 115 | 40-140 | | | |
| Chrysene | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 2.51 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | | | |
| Dibenzofuran | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | | | |
| Diethylphthalate | 2.72 | 0.250 | mg/kg wet | 2.500 | | 109 | 40-140 | | | |
| Dimethylphthalate | 2.61 | 0.250 | mg/kg wet | 2.500 | | 104 | 15-140 | | | |
| Di-n-butylphthalate | 2.81 | 0.250 | mg/kg wet | 2.500 | | 112 | 40-140 | | | |
| Di-n-octylphthalate | 2.93 | 0.500 | mg/kg wet | 2.500 | | 117 | 40-140 | | | |
| Fluoranthene | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Fluorene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 97 | 40-140 | | | |
| Hexachlorobenzene | 2.12 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Hexachlorobutadiene | 2.14 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | | | |
| Hexachloroethane | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| Isophorone | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| Naphthalene | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | | | |
| Nitrobenzene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | | | |
| N-Nitrosodimethylamine | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | | | |
| Pentachlorophenol | 1.87 | 1.00 | mg/kg wet | 2.500 | | 75 | 15-140 | | | |
| Phenanthrene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | | | |
| Phenol | 2.51 | 0.250 | mg/kg wet | 2.500 | | 100 | 15-140 | | | |
| Pyrene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.43* | | mg/kg wet | *2.500* | | *97* | *30-130* | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0819

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DI42406 - 3546** | | | | | | | | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.39* | | mg/kg wet | *3.750* | | *90* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.91* | | mg/kg wet | *3.750* | | *104* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.36* | | mg/kg wet | *2.500* | | *94* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *4.04* | | mg/kg wet | *3.750* | | *108* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.49* | | mg/kg wet | *2.500* | | *100* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *4.34* | | mg/kg wet | *3.750* | | *116* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.61* | | mg/kg wet | *2.500* | | *104* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1-Biphenyl | 2.29 | 0.025 | mg/kg wet | 2.500 | | 91 | 40-140 | 2 | 30 | |
| 1,2,4-Trichlorobenzene | 2.13 | 0.250 | mg/kg wet | 2.500 | | 85 | 40-140 | 0.2 | 30 | |
| 1,2-Dichlorobenzene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 4 | 30 | |
| 1,3-Dichlorobenzene | 2.24 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 0.04 | 30 | |
| 1,4-Dichlorobenzene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 1 | 30 | |
| 2,4,5-Trichlorophenol | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 30-130 | 0.3 | 30 | |
| 2,4,6-Trichlorophenol | 2.32 | 0.250 | mg/kg wet | 2.500 | | 93 | 30-130 | 2 | 30 | |
| 2,4-Dichlorophenol | 2.16 | 0.250 | mg/kg wet | 2.500 | | 87 | 30-130 | 1 | 30 | |
| 2,4-Dimethylphenol | 3.06 | 0.250 | mg/kg wet | 2.500 | | 123 | 30-130 | 7 | 30 | |
| 2,4-Dinitrophenol | 2.67 | 1.00 | mg/kg wet | 2.500 | | 107 | 15-140 | 3 | 30 | |
| 2,4-Dinitrotoluene | 2.47 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 0.6 | 30 | |
| 2,6-Dinitrotoluene | 2.45 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 1 | 30 | |
| 2-Chloronaphthalene | 2.30 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 0.9 | 30 | |
| 2-Chlorophenol | 2.35 | 0.250 | mg/kg wet | 2.500 | | 94 | 30-130 | 3 | 30 | |
| 2-Methylnaphthalene | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 2 | 30 | |
| 2-Methylphenol | 2.38 | 0.250 | mg/kg wet | 2.500 | | 95 | 15-140 | 0.2 | 30 | |
| 2-Nitrophenol | 2.23 | 0.500 | mg/kg wet | 2.500 | | 89 | 30-130 | 2 | 30 | |
| 3,3´-Dichlorobenzidine | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 1 | 30 | |
| 3+4-Methylphenol | 5.18 | 0.250 | mg/kg wet | 5.000 | | 104 | 15-140 | 0.7 | 30 | |
| 4-Bromophenyl-phenylether | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 2 | 30 | |
| 4-Chloroaniline | 2.10 | 0.250 | mg/kg wet | 2.500 | | 84 | 15-140 | 4 | 30 | |
| 4-Nitrophenol | 2.61 | 1.00 | mg/kg wet | 2.500 | | 104 | 15-140 | 6 | 30 | |
| Acenaphthene | 2.41 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 0.1 | 30 | |
| Acenaphthylene | 2.63 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 0.08 | 30 | |
| Acetophenone | 2.41 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 2 | 30 | |
| Aniline | 2.00 | 0.250 | mg/kg wet | 2.500 | | 80 | 40-140 | 3 | 30 | |
| Anthracene | 2.59 | 0.250 | mg/kg wet | 2.500 | | 103 | 40-140 | 3 | 30 | |
| Azobenzene | 2.79 | 0.250 | mg/kg wet | 2.500 | | 112 | 40-140 | 2 | 30 | |
| Benzo(a)anthracene | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 3 | 30 | |
| Benzo(a)pyrene | 2.62 | 0.250 | mg/kg wet | 2.500 | | 105 | 40-140 | 3 | 30 | |
| Benzo(b)fluoranthene | 2.39 | 0.250 | mg/kg wet | 2.500 | | 96 | 40-140 | 4 | 30 | |
| Benzo(g,h,i)perylene | 2.72 | 0.250 | mg/kg wet | 2.500 | | 109 | 40-140 | 4 | 30 | |
| Benzo(k)fluoranthene | 2.56 | 0.250 | mg/kg wet | 2.500 | | 102 | 40-140 | 3 | 30 | |
| bis(2-Chloroethoxy)methane | 2.39 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 0.1 | 30 | |
| bis(2-Chloroethyl)ether | 2.50 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 2 | 30 | |
| bis(2-chloroisopropyl)Ether | 2.18 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 3 | 30 | |
| bis(2-Ethylhexyl)phthalate | 2.82 | 0.250 | mg/kg wet | 2.500 | | 113 | 40-140 | 0.4 | 30 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0819

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch DI42406 - 3546** | | | | | | | | | | |
| Butylbenzylphthalate | 2.95 | 0.250 | mg/kg wet | 2.500 | | 118 | 40-140 | 3 | 30 | |
| Chrysene | 2.52 | 0.250 | mg/kg wet | 2.500 | | 101 | 40-140 | 2 | 30 | |
| Dibenzo(a,h)Anthracene | 2.59 | 0.250 | mg/kg wet | 2.500 | | 104 | 40-140 | 3 | 30 | |
| Dibenzofuran | 2.29 | 0.250 | mg/kg wet | 2.500 | | 92 | 40-140 | 2 | 30 | |
| Diethylphthalate | 2.69 | 0.250 | mg/kg wet | 2.500 | | 108 | 40-140 | 0.9 | 30 | |
| Dimethylphthalate | 2.61 | 0.250 | mg/kg wet | 2.500 | | 105 | 15-140 | 0.3 | 30 | |
| Di-n-butylphthalate | 2.89 | 0.250 | mg/kg wet | 2.500 | | 115 | 40-140 | 3 | 30 | |
| Di-n-octylphthalate | 2.94 | 0.500 | mg/kg wet | 2.500 | | 118 | 40-140 | 0.3 | 30 | |
| Fluoranthene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 5 | 30 | |
| Fluorene | 2.44 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 1 | 30 | |
| Hexachlorobenzene | 2.15 | 0.250 | mg/kg wet | 2.500 | | 86 | 40-140 | 2 | 30 | |
| Hexachlorobutadiene | 2.21 | 0.250 | mg/kg wet | 2.500 | | 88 | 40-140 | 3 | 30 | |
| Hexachloroethane | 2.39 | 0.250 | mg/kg wet | 2.500 | | 95 | 40-140 | 0.1 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 2.49 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 2 | 30 | |
| Isophorone | 2.48 | 0.250 | mg/kg wet | 2.500 | | 99 | 40-140 | 1 | 30 | |
| Naphthalene | 2.26 | 0.250 | mg/kg wet | 2.500 | | 90 | 40-140 | 4 | 30 | |
| Nitrobenzene | 2.50 | 0.250 | mg/kg wet | 2.500 | | 100 | 40-140 | 3 | 30 | |
| N-Nitrosodimethylamine | 2.17 | 0.250 | mg/kg wet | 2.500 | | 87 | 40-140 | 8 | 30 | |
| Pentachlorophenol | 2.01 | 1.00 | mg/kg wet | 2.500 | | 80 | 15-140 | 7 | 30 | |
| Phenanthrene | 2.46 | 0.250 | mg/kg wet | 2.500 | | 98 | 40-140 | 3 | 30 | |
| Phenol | 2.54 | 0.250 | mg/kg wet | 2.500 | | 102 | 15-140 | 2 | 30 | |
| Pyrene | 2.75 | 0.250 | mg/kg wet | 2.500 | | 110 | 40-140 | 5 | 30 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *2.35* | | mg/kg wet | *2.500* | | *94* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *3.40* | | mg/kg wet | *3.750* | | *91* | *30-130* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *3.87* | | mg/kg wet | *3.750* | | *103* | *30-130* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *2.29* | | mg/kg wet | *2.500* | | *92* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *3.98* | | mg/kg wet | *3.750* | | *106* | *30-130* | | | |
| *Surrogate: Nitrobenzene-d5* | *2.39* | | mg/kg wet | *2.500* | | *96* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *4.30* | | mg/kg wet | *3.750* | | *115* | *30-130* | | | |
| *Surrogate: p-Terphenyl-d14* | *2.57* | | mg/kg wet | *2.500* | | *103* | *30-130* | | | |
| **MADEP-EPH Extractable Petroleum Hydrocarbons** | | | | | | | | | | |
| **Batch DI42504 - 3546** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| C19-C36 Aliphatics1 | ND | 15.0 | mg/kg wet | | | | | | | |
| C9-C18 Aliphatics1 | ND | 15.0 | mg/kg wet | | | | | | | |
| *Surrogate: 1-Chlorooctadecane* | *1.50* | | mg/kg wet | *2.000* | | *75* | *40-140* | | | |
| **Blank** | | | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.20 | mg/kg wet | | | | | | | |
| Acenaphthene | ND | 0.40 | mg/kg wet | | | | | | | |
| Acenaphthylene | ND | 0.20 | mg/kg wet | | | | | | | |
| Anthracene | ND | 0.40 | mg/kg wet | | | | | | | |
| Benzo(a)anthracene | ND | 0.40 | mg/kg wet | | | | | | | |
| Benzo(a)pyrene | ND | 0.40 | mg/kg wet | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.40 | mg/kg wet | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0819

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| MADEP-EPH Extractable Petroleum Hydrocarbons | | | | | | | | | | |
| **Batch DI42504 - 3546** | | | | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.40 | mg/kg wet | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.40 | mg/kg wet | | | | | | | |
| C11-C22 Unadjusted Aromatics1 | ND | 15.0 | mg/kg wet | | | | | | | |
| Chrysene | ND | 0.40 | mg/kg wet | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.20 | mg/kg wet | | | | | | | |
| Fluoranthene | ND | 0.40 | mg/kg wet | | | | | | | |
| Fluorene | ND | 0.40 | mg/kg wet | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.40 | mg/kg wet | | | | | | | |
| Naphthalene | ND | 0.40 | mg/kg wet | | | | | | | |
| Phenanthrene | ND | 0.40 | mg/kg wet | | | | | | | |
| Pyrene | ND | 0.40 | mg/kg wet | | | | | | | |
| *Surrogate: 2-Bromonaphthalene* | *1.96* | | mg/kg wet | *2.000* | | *98* | *40-140* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *1.84* | | mg/kg wet | *2.000* | | *92* | *40-140* | | | |
| *Surrogate: O-Terphenyl* | *1.59* | | mg/kg wet | *2.000* | | *80* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| C19-C36 Aliphatics1 | 12.9 | 15.0 | mg/kg wet | 16.00 | | 81 | 40-140 | | | |
| C9-C18 Aliphatics1 | 9.0 | 15.0 | mg/kg wet | 12.00 | | 75 | 40-140 | | | |
| *Surrogate: 1-Chlorooctadecane* | *1.65* | | mg/kg wet | *2.000* | | *82* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| 2-Methylnaphthalene | 1.27 | 0.20 | mg/kg wet | 2.000 | | 63 | 40-140 | | | |
| Acenaphthene | 1.39 | 0.40 | mg/kg wet | 2.000 | | 70 | 40-140 | | | |
| Acenaphthylene | 1.43 | 0.20 | mg/kg wet | 2.000 | | 72 | 40-140 | | | |
| Anthracene | 1.59 | 0.40 | mg/kg wet | 2.000 | | 80 | 40-140 | | | |
| Benzo(a)anthracene | 1.43 | 0.40 | mg/kg wet | 2.000 | | 71 | 40-140 | | | |
| Benzo(a)pyrene | 1.57 | 0.40 | mg/kg wet | 2.000 | | 78 | 40-140 | | | |
| Benzo(b)fluoranthene | 1.41 | 0.40 | mg/kg wet | 2.000 | | 70 | 40-140 | | | |
| Benzo(g,h,i)perylene | 1.28 | 0.40 | mg/kg wet | 2.000 | | 64 | 40-140 | | | |
| Benzo(k)fluoranthene | 1.28 | 0.40 | mg/kg wet | 2.000 | | 64 | 40-140 | | | |
| C11-C22 Unadjusted Aromatics1 | 25.1 | 15.0 | mg/kg wet | 34.00 | | 74 | 40-140 | | | |
| Chrysene | 1.40 | 0.40 | mg/kg wet | 2.000 | | 70 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 1.19 | 0.20 | mg/kg wet | 2.000 | | 60 | 40-140 | | | |
| Fluoranthene | 1.44 | 0.40 | mg/kg wet | 2.000 | | 72 | 40-140 | | | |
| Fluorene | 1.43 | 0.40 | mg/kg wet | 2.000 | | 71 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 1.29 | 0.40 | mg/kg wet | 2.000 | | 64 | 40-140 | | | |
| Naphthalene | 1.29 | 0.40 | mg/kg wet | 2.000 | | 65 | 40-140 | | | |
| Phenanthrene | 1.44 | 0.40 | mg/kg wet | 2.000 | | 72 | 40-140 | | | |
| Pyrene | 1.51 | 0.40 | mg/kg wet | 2.000 | | 76 | 40-140 | | | |
| *Surrogate: 2-Bromonaphthalene* | *1.99* | | mg/kg wet | *2.000* | | *100* | *40-140* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *1.87* | | mg/kg wet | *2.000* | | *93* | *40-140* | | | |
| *Surrogate: O-Terphenyl* | *1.60* | | mg/kg wet | *2.000* | | *80* | *40-140* | | | |
| **LCS** | | | | | | | | | | |
| 2-Methylnaphthalene Breakthrough | 0.0 | | % | | | | 0-5 | | | |
| Naphthalene Breakthrough | 0.0 | | % | | | | 0-5 | | | |
| **LCS Dup** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0819

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| MADEP-EPH Extractable Petroleum Hydrocarbons | | | | | | | | | | |
| **Batch DI42504 - 3546** | | | | | | | | | | |
| C19-C36 Aliphatics1 | 12.6 | 15.0 | mg/kg wet | 16.00 | | 79 | 40-140 | 3 | 25 | |
| C9-C18 Aliphatics1 | 8.4 | 15.0 | mg/kg wet | 12.00 | | 70 | 40-140 | 8 | 25 | |
| *Surrogate: 1-Chlorooctadecane* | *1.72* | | mg/kg wet | *2.000* | | *86* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| 2-Methylnaphthalene | 1.21 | 0.20 | mg/kg wet | 2.000 | | 60 | 40-140 | 5 | 30 | |
| Acenaphthene | 1.33 | 0.40 | mg/kg wet | 2.000 | | 66 | 40-140 | 5 | 30 | |
| Acenaphthylene | 1.30 | 0.20 | mg/kg wet | 2.000 | | 65 | 40-140 | 10 | 30 | |
| Anthracene | 1.55 | 0.40 | mg/kg wet | 2.000 | | 78 | 40-140 | 3 | 30 | |
| Benzo(a)anthracene | 1.33 | 0.40 | mg/kg wet | 2.000 | | 66 | 40-140 | 7 | 30 | |
| Benzo(a)pyrene | 1.49 | 0.40 | mg/kg wet | 2.000 | | 74 | 40-140 | 5 | 30 | |
| Benzo(b)fluoranthene | 1.37 | 0.40 | mg/kg wet | 2.000 | | 69 | 40-140 | 3 | 30 | |
| Benzo(g,h,i)perylene | 1.20 | 0.40 | mg/kg wet | 2.000 | | 60 | 40-140 | 6 | 30 | |
| Benzo(k)fluoranthene | 1.18 | 0.40 | mg/kg wet | 2.000 | | 59 | 40-140 | 8 | 30 | |
| C11-C22 Unadjusted Aromatics1 | 23.7 | 15.0 | mg/kg wet | 34.00 | | 70 | 40-140 | 6 | 25 | |
| Chrysene | 1.34 | 0.40 | mg/kg wet | 2.000 | | 67 | 40-140 | 4 | 30 | |
| Dibenzo(a,h)Anthracene | 1.13 | 0.20 | mg/kg wet | 2.000 | | 57 | 40-140 | 5 | 30 | |
| Fluoranthene | 1.35 | 0.40 | mg/kg wet | 2.000 | | 68 | 40-140 | 6 | 30 | |
| Fluorene | 1.31 | 0.40 | mg/kg wet | 2.000 | | 66 | 40-140 | 8 | 30 | |
| Indeno(1,2,3-cd)Pyrene | 1.21 | 0.40 | mg/kg wet | 2.000 | | 60 | 40-140 | 6 | 30 | |
| Naphthalene | 1.24 | 0.40 | mg/kg wet | 2.000 | | 62 | 40-140 | 5 | 30 | |
| Phenanthrene | 1.37 | 0.40 | mg/kg wet | 2.000 | | 68 | 40-140 | 5 | 30 | |
| Pyrene | 1.47 | 0.40 | mg/kg wet | 2.000 | | 74 | 40-140 | 3 | 30 | |
| *Surrogate: 2-Bromonaphthalene* | *1.96* | | mg/kg wet | *2.000* | | *98* | *40-140* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *1.90* | | mg/kg wet | *2.000* | | *95* | *40-140* | | | |
| *Surrogate: O-Terphenyl* | *1.43* | | mg/kg wet | *2.000* | | *72* | *40-140* | | | |
| **LCS Dup** | | | | | | | | | | |
| 2-Methylnaphthalene Breakthrough | 0.0 | | % | | | | 0-5 | | 200 | |
| Naphthalene Breakthrough | 0.0 | | % | | | | 0-5 | | 200 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0819

**Notes and Definitions**

| | |
|---|---|
| Z-04 | MeOH - covered |
| U | Analyte included in the analysis, but not detected |
| SM | Surrogate recovery(ies) outside of criteria due to matrix (UCM/coelution/matrix is present) (SM). |
| Q | Calibration required quadratic regression (Q). |
| EL | Elevated Method Reporting Limits due to sample matrix (EL). |
| D | Diluted. |
| CD+ | Continuing Calibration %Diff/Drift is above control limit (CD+). |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |
| RL | Reporting Limit |
| EDL | Estimated Detection Limit |
| MF | Membrane Filtration |
| MPN | Most Probable Number |
| TNTC | Too numerous to Count |
| CFU | Colony Forming Units |

*CERTIFICATE OF ANALYSIS*

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: MassCEC Phase III - Site 1 ESS Laboratory Work Order: 24I0819

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

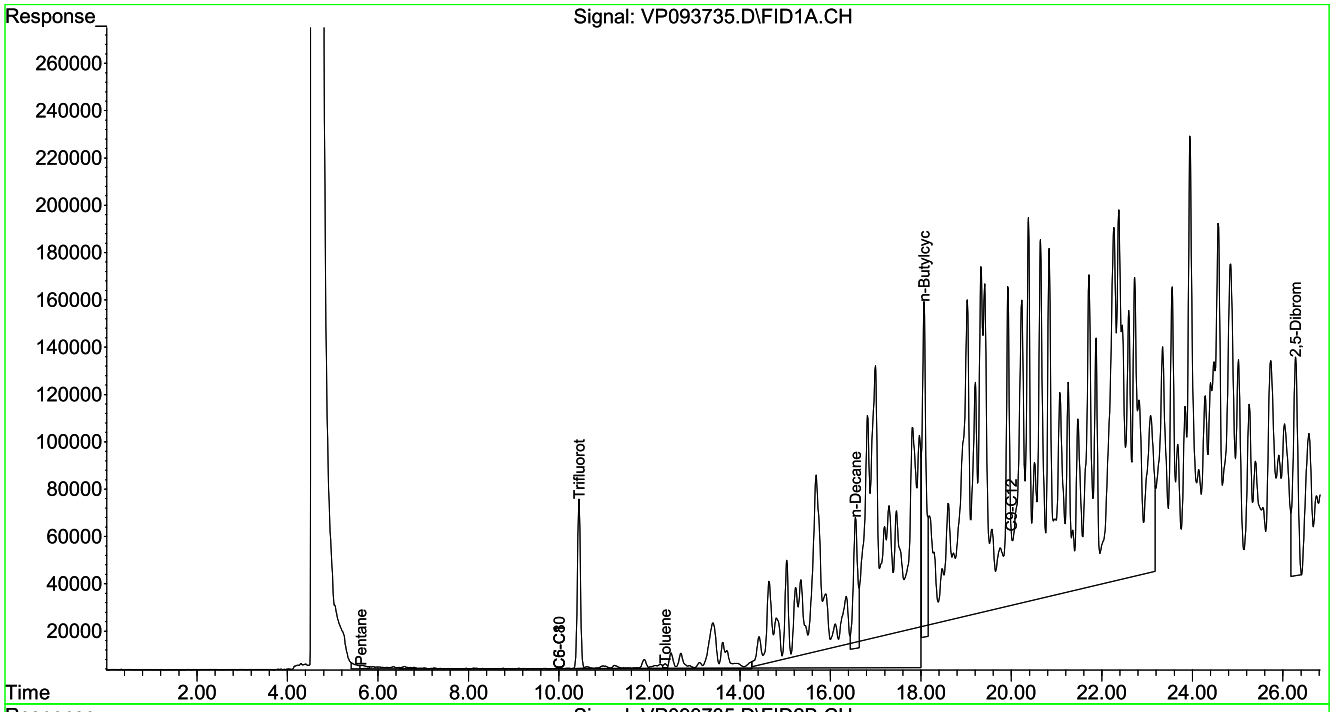
Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

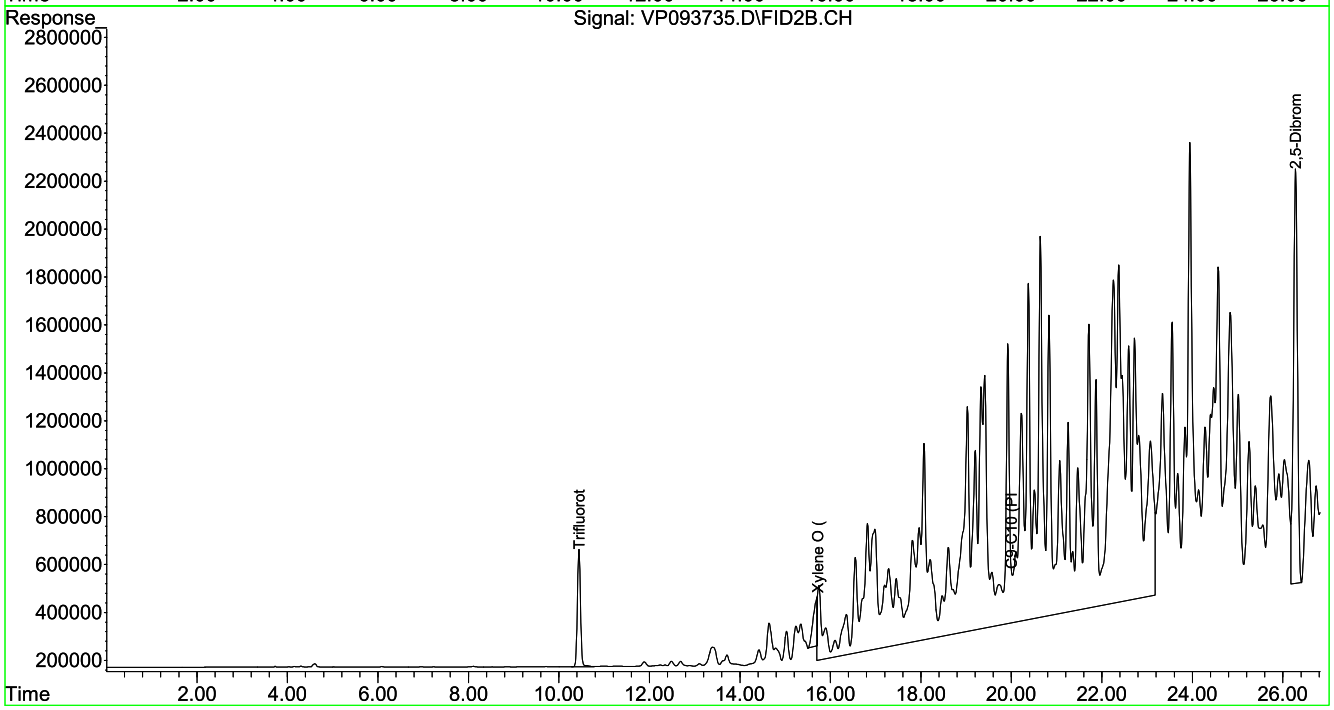
Quantitation Report (QT Reviewed)

Data Path : Q:\VOA\VGC2\DATA\2024 DATA\09-2024\092524\
Data File : VP093735.D
Signal(s) : Signal #1: FID1A.CH Signal #2: FID2B.CH
Acq On : 25 Sep 2024 2:28 pm
Operator : MEK
Sample : 24I0819-02
Misc : 100
InstName : VGC2
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Sep 26 10:59:59 2024
Quant Method : Q:\VOA\VGC2\MethodsGC2\VP071724.M
Quant Title : VPH AQ:2407036 VPH SOIL:2407037
QLast Update : Wed Sep 04 11:31:35 2024
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



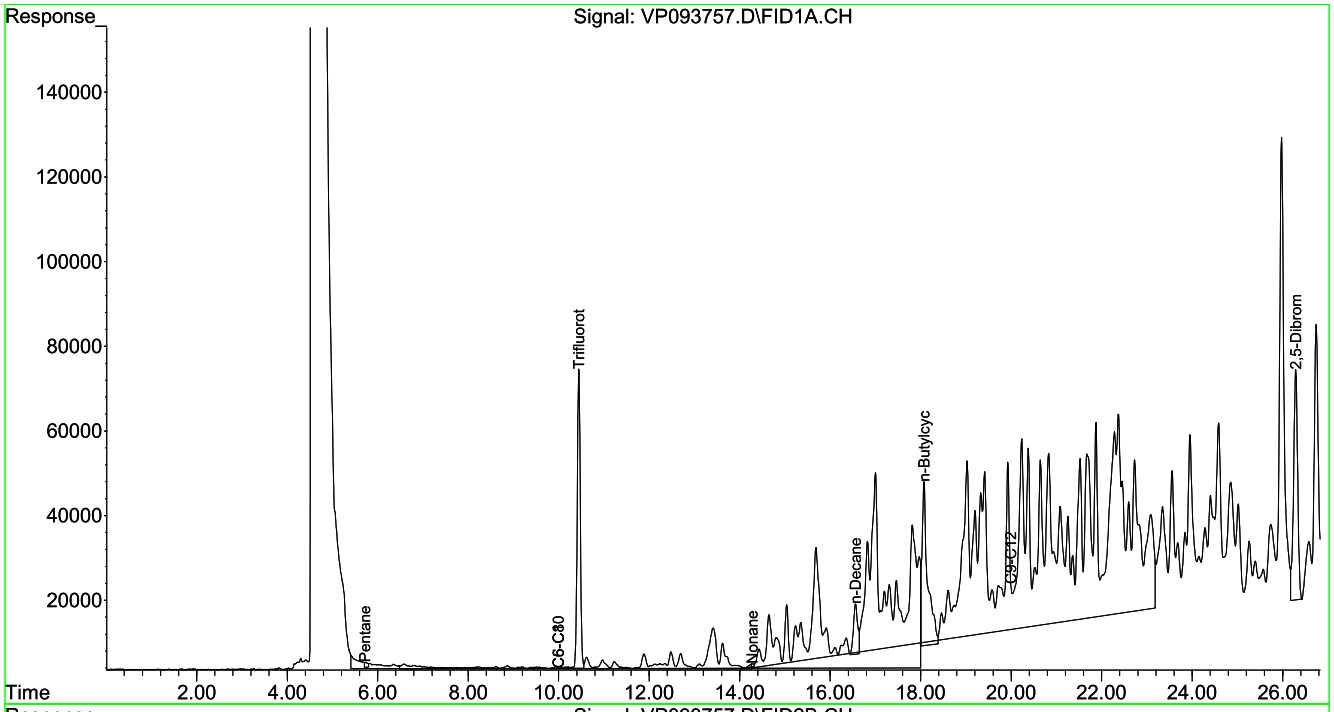



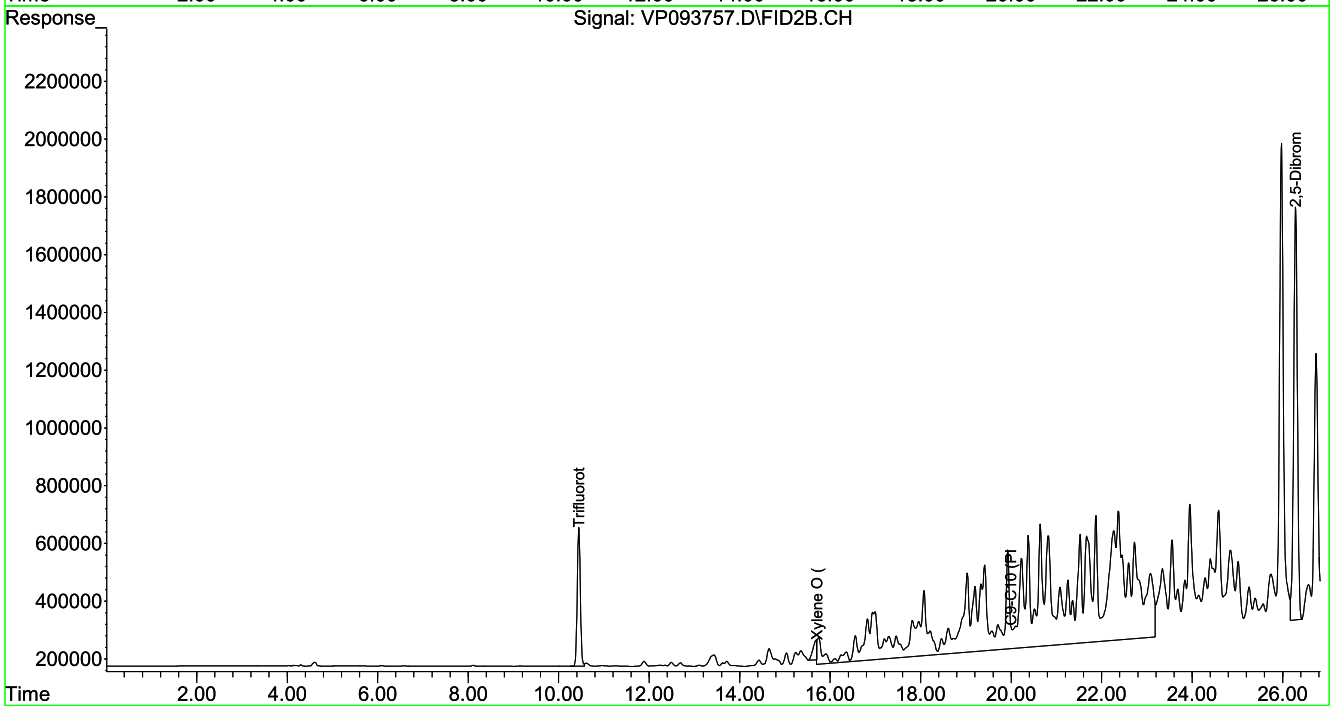
Quantitation Report (QT Reviewed)

Data Path : Q:\VOA\VGC2\DATA\2024 DATA\09-2024\092624\
Data File : VP093757.D
Signal(s) : Signal #1: FID1A.CH Signal #2: FID2B.CH
Acq On : 26 Sep 2024 12:22 pm
Operator : MEK
Sample : 24I0819-03
Misc : 100
InstName : VGC2
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Sep 30 10:11:31 2024
Quant Method : Q:\VOA\VGC2\MethodsGC2\VP071724.M
Quant Title : VPH AQ:2407036 VPH SOIL:2407037
QLast Update : Wed Sep 04 11:31:35 2024
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



## ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Envtal Consultants - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 2410819
Date Received: 9/24/2024
Project Due Date: 10/1/2024
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 4.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? (Yes) / No
    a. Air bubbles in aqueous VOAs? Yes / (No)
    b. Does methanol cover soil completely? (Yes) / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By/Acid Lot#:
    b. If dissolved metals are requested, are they: Yes / No Field Filtered
    c. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / (No)
    Who was contacted? Date: Time: By:

Resolution:

| Sample Number | Container ID | Proper Container | Air Bubbles Present | Sufficient Volume | Container Type | Preservative | Record pH (Cyanide and 608 Pesticides) |
|---|---|---|---|---|---|---|---|
| 1 | 594816 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 + ~~594985~~ ~~594989~~ | | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 594817 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 2 | 594819 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 3 | 594818 | Yes | N/A | Yes | 4 oz. Jar | NP | |
| 3 | 594820 | Yes | N/A | Yes | VOA Vial | MeOH | |
| 3 | 594984 | Yes | N/A | Yes | 4 oz. Jar | NP | |

**2nd Review**

**Were all containers scanned into storage/lab?** Initials RB (Yes) / No
Are barcode labels on correct containers? Yes / No / (NA)
Are all Flashpoint stickers attached/container ID # circled? Yes / No / (NA)
Are all Hex Chrome stickers attached? Yes / No / (NA)
Are all QC stickers attached? Yes / No / (NA)
Are VOA stickers attached if bubbles noted? Yes / No / (NA)

Completed By: Date & Time: 9/24/24 16:44
Reviewed By: Date & Time: 9/24/24 1655

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 24I0819

| | | | |
|---|---|---|---|
| **Turn Time** | 5 | Days | |
| **Regulatory State** | Massachusetts | | |
| **Reporting Limits** | MA MCP RCS-1 | | |
| **Is this project for any of the following?:** | ○ CT RCP | ◉ MA MCP | ○ RGP |
| **Electonic Deliverables** | ☑ Data Checker | ☑ Excel | ☑ Other (Please Specify →) CEC EDD |

| | | | |
|---|---|---|---|
| **Company Name** Civil and Environmental Consultants | **Project #** 332-344 | **Project Name** MassCEC Phase III - Site 1 | |
| **Contact Person** Cassia Dal Bello | | **Address** 31 Bellows Road | |
| **City** Raynham | **State** MA | **Zip Code** 02767 | **PO #** |
| **Telephone Number** 774-501-2176 | **FAX Number** | **Email Address** cdalbello; jkitchen, dbarboza@cecinc.com | |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | Analysis: SVOCs | VPH (with target VOCs) | EPH (with target PAHs) |
|---|---|---|---|---|---|---|---|---|
| 1 | 9-23-2024 | 11:45 | Composite | Soil | CEC-8-3 2-4 | X | | |
| 2 | 9-23-2024 | 12:00 | Grab | Soil | CEC-8-3 7-8 | X | X | X |
| 3 | 9-23-2024 | 12:25 | Grab/Composite | Soil | CEC-8-3 12-14.5 | X | X | X |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| | | | |
|---|---|---|---|
| **Container Type:** | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | AG | V | AG |
| **Container Volume:** | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | 10 | 7 | 10 |
| **Preservation Code:** | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | 1 | 6 | 1 |
| | **Number of Containers per Sample:** | 1 | 1 | 1 |

**Laboratory Use Only**
Cooler Present: 4C 5 ○ Drop Off
Seals Intact: ○ Pickup
Cooler Temperature: 4.1 °C / C

**Sampled by :** TS and MKM

**Comments:** Please specify "Other" preservative and containers types in this space

| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| Mary Kate Mccann 17:00 9/23/24 | Received fridge | 9/24/24 12:35 | 9/24/24 12:35 |
| Relinquished by: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
| 9/24/24 18:07 | 9/24/24 @ 16:02 | | |

# APPENDIX E

# PUBLIC NOTIFICATIONS

March 20, 2025

City of New Bedford Mayor
Jonathan F. Mitchell
133 William St #311
New Bedform, MA 02740

Subject: Notification of Release Abatement Measure Plan
NBMCT Terminal Expansion, 4 Wright Street
New Bedford, Massachusetts 02740
RTN 4-0050261
CEC Project 332-344

Dear Mr. Mitchell,

In accordance with the requirements of the Massachusetts Contingency Plan (MCP), 310 CMR 40.103(3)(d), Civil & Environmental Consultants, Inc., is writing to notify you that a Release Abatement Measure (RAM) Plan has been completed and submitted to the Massachusetts Department of Environmental Protection (MassDEP) for the above referenced property (the Property). The RAM activities will consist of the excavation and off-site disposal or reuse of impacted soil and the on-Site reuse of impacted soils during earthwork associated with the development. The RAM activities are being tracked under MassDEP's Release Tracking Number (RTN) 4-0050261. These activities are scheduled to commence in Spring/Summer 2025.

If you should have any questions, please do not hesitate to contact the undersigned.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

Cassia Dal Bello
Project Manager

Jonathan D. Kitchen, PG, LSP
Principal

Cc: City of New Bedford Health Department
Stephanie Sloan, Director
1213 Purchase Street
New Bedford, Massachusetts, 02740